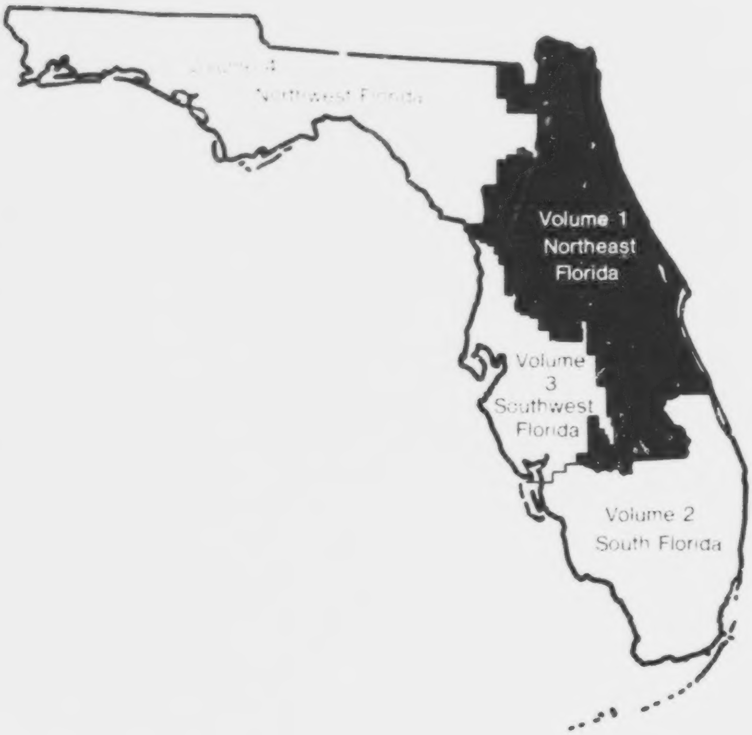
Water Resources Data Florida

Water Year 1989

Volume 1A. Northeast Florida Surface Water


Volume 4
Northwest Florida
Volume 1
Northeast
Florida
Volume
3
Southwest
Florida
Volume 2
South Florida

U.S. GEOLOGICAL SURVEY WATER-DATA REPORT FL-89-1A
Prepared in cooperation with the State of Florida
and with other agencies

I

CALENDAR FOR WATER YEAR 1989

1988

OCTOBER

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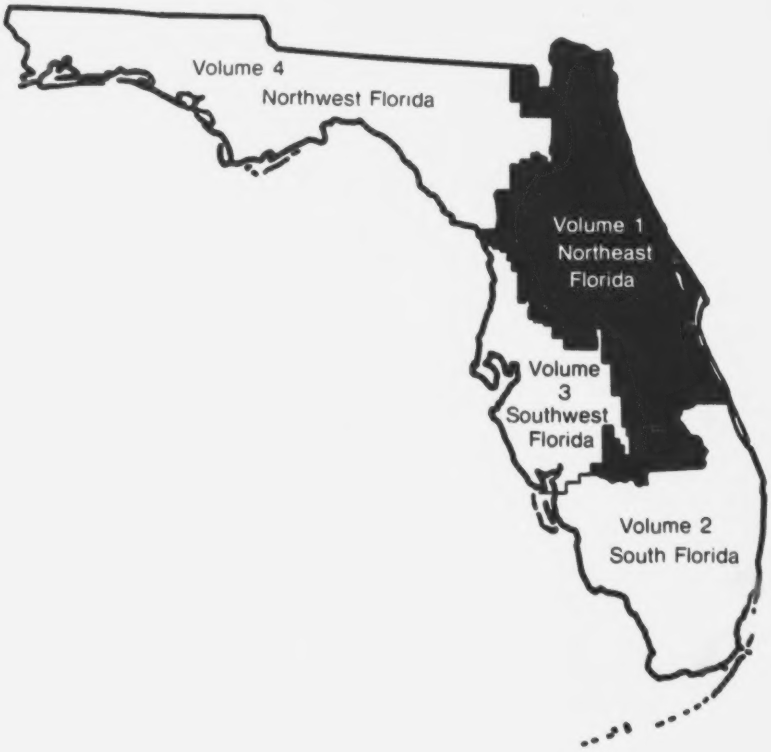
DEPARTMENT OF THE INTERIOR

Water Resources Data Florida

Water Year 1989

Volume 1A: Northeast Florida Surface Water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Prepared in cooperation with the State of Florida
and with other agencies

UNITED STATES DEPARTMENT OF THE INTERIOR
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Prepared in cooperation with the
State of Florida
and with other agencies as listed
under cooperation

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1990

WATER RESOURCES DATA - FLORIDA, 1989
Volume 1A: Northeast Florida

PREFACE

This volume of the annual hydrologic data report of Florida is one of a series of annual reports that document hydrologic data gathered from the U.S. Geological Survey's surface- and ground-water data-collection networks in each State, Puerto Rico, and the Trust Territories. These records of streamflow, ground-water levels, and quality of water provide the hydrologic information needed by State, local, and Federal agencies, and the private sector for developing and managing our Nation's land and water resources. Hydrologic data for Florida are contained in four volumes:

Volume 1. Northeast Florida
Volume 2. South Florida
Volume 3. Southwest Florida
Volume 4. Northwest Florida

ACKNOWLEDGMENT

The water-resources data for northeast Florida were processed and prepared for publication under the supervision of Larry D. Fayard, Chief, Hydrologic Surveillance and Data Analysis Section.

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15. Supplementary Notes

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16. Abstract (Limit: 200 words)

Water resources data for the 1989 water year in Florida consist of continuous or daily discharge for 295 streams, periodic discharge for 36 streams, miscellaneous discharge for 75 streams, continuous or daily stage for 154 streams, continuous daily tide stage for 12 sites, periodic stage for 13 streams, peak discharge for 57 streams, and peak stage for 30 streams; continuous or daily elevations for 73 lakes, periodic elevations for 72 lakes; continuous ground-water levels for 514 wells, periodic ground-water levels for 798 wells, and miscellaneous water-level measurements for 2,687 wells; quality-of-water data for 149 surface-water sites and 827 wells.

The data for northeast Florida include continuous or daily discharge for 122 streams, periodic discharge for 27 streams, miscellaneous discharge for 30 streams, continuous or daily stage for 38 streams, continuous or daily tide stage for 3 sites, periodic stage for 2 streams, peak discharge for 17 streams, and peak stage for 30 streams; continuous or daily elevations for 41 lakes, periodic elevations for 53 lakes; continuous ground-water levels for 85 wells, periodic ground-water levels for 150 wells, and miscellaneous water-level measurements for 950 wells; quality-of-water data for 60 surface-water sites and 100 wells.

These data represent the National Water Data System records collected by the U.S. Geological Survey and cooperating local, state and federal agencies in Florida.

17. Document Analysis a. Descriptors

*Florida, *Hydrologic data, *Surface water, *Ground water, *Water quality, Flow rate, Gaging stations, Lakes, Reservoirs, Chemical analyses, Sediments, Water temperatures, Sampling sites, Water levels, Water analyses, Elevations, Water wells.

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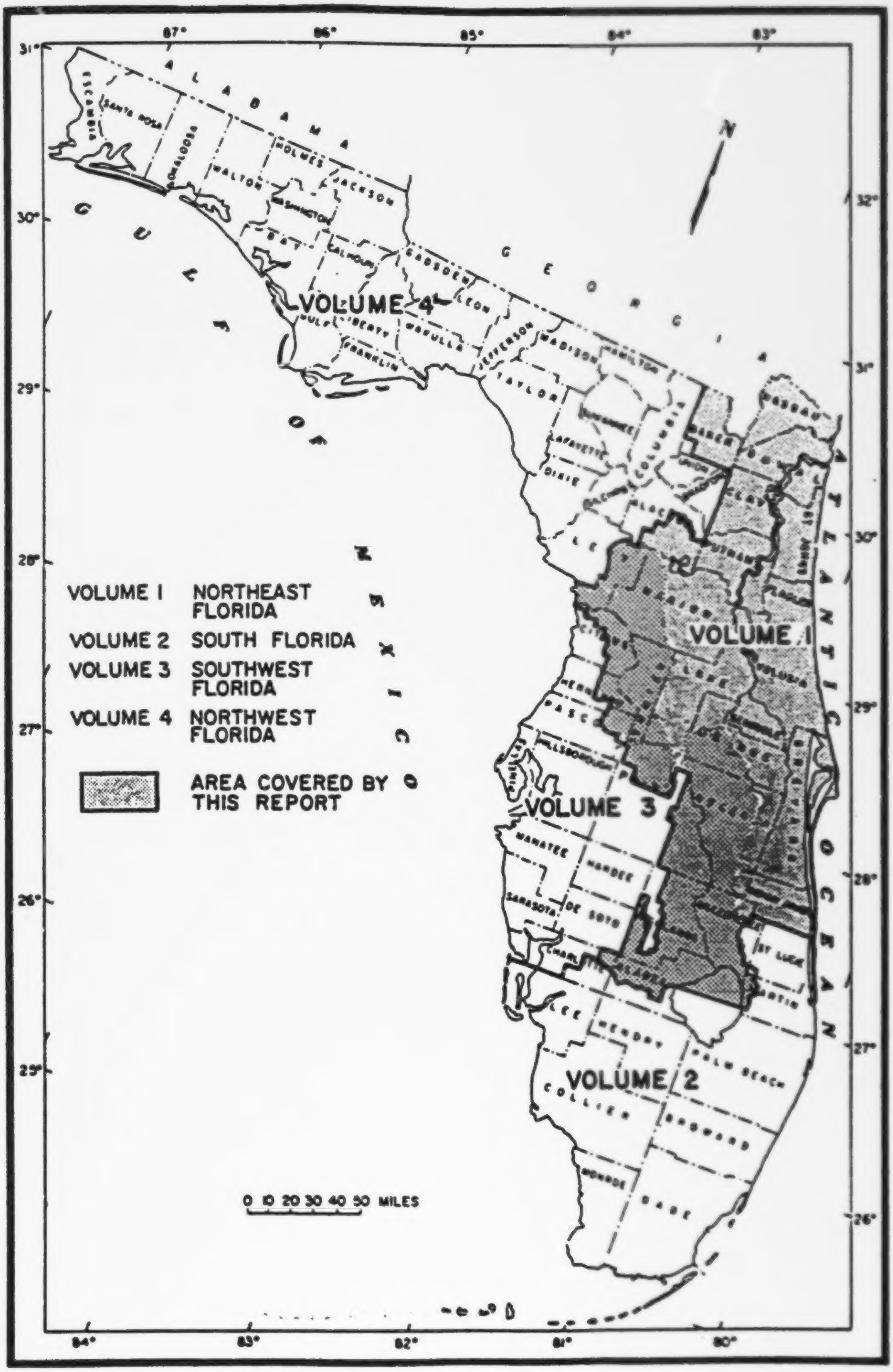
VOLUME 1 NORTHEAST FLORIDA
VOLUME 2 SOUTH FLORIDA
VOLUME 3 SOUTHWEST FLORIDA
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AREA COVERED BY THIS REPORT
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VOLUME 1
VOLUME 3
VOLUME 2
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GEORGIA
GULF OF MEXICO
ATLANTIC OCEAN
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WALTON
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Figure 1.--Geographic area covered by this report.

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Volume 1A: Northeast Florida

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WATER RESOURCES DATA - FLORIDA, 1989
Volume 1A: Northeast Florida

INTRODUCTION

The Water Resources Division of the U.S. Geological Survey, in cooperation with State, local, and Federal agencies, obtains a large amount of data pertaining to the water resources of Florida each water year. These data, accumulated during many water years, constitute a valuable data base for developing an improved understanding of the water resources of the State.

The data for northeast Florida include continuous or daily discharge for 122 streams, periodic discharge for 27 streams, miscellaneous discharge for 30 streams, continuous or daily stage for 38 streams, continuous or daily tide stage for 3 sites, periodic stage for 2 streams, peak discharge for 17 streams, and peak stage for 30 streams; continuous or daily elevations for 41 lakes, periodic elevations for 53 lakes; continuous ground-water levels for 85 wells, periodic ground-water levels for 150 wells, and miscellaneous water-level measurements for 950 wells; quality-of-water data for 60 surface-water sites and 100 wells.

This series of annual reports for Florida began with the 1961 water year with a report that contained only data relating to the quantities of surface water. For the 1964 water year, a similar report was introduced that contained only data relating to water quality. Beginning with the 1975 water year, the report format was changed to present, in one volume, data on quantities of surface water, quality of surface and ground water, and ground-water levels.

Prior to introduction of this series and for several water years concurrent with it, water-resources data for Florida were published in U.S. Geological Survey Water-Supply Papers. Data on stream discharge and stage and on lake or reservoir contents and stage, through September 1960, were published annually under the title "Surface-Water Supply of the United States." For the 1961 through 1970 water years, the data were published in two 5-year reports. Data on chemical quality, temperature, and suspended sediment for the 1941 through 1970 water years were published annually under the title "Quality of Surface Waters of the United States," and water levels for the 1935 through 1974 water years were published under the title "Ground-Water Levels in the United States." The above mentioned Water-Supply Papers may be consulted in the libraries of the principal cities of the United States and may be purchased from Distribution Branch, Text Products Section, U.S. Geological Survey, Books and Open-File Reports, Federal Center, Building 41, Box 25425, Denver, CO 80225.

Publications similar to this report are published annually by the Geological Survey for all States. These official Survey reports have an identification number consisting of the two-letter State abbreviation, the last two digits of the water year, and the volume number. For example, this volume is identified as "U.S. Geological Survey Water-Data Report FL-89-1A." For archiving and general distribution, the reports for 1971-74 water years also are identified as water-data reports. These water-data reports are for sale in paper copy or in microfiche by the National Technical Information Service, U.S. Department of Commerce, Springfield, VA 22161.

Additional information, including current prices, for ordering specific reports may be obtained from the Office Chief at the address given on the back of the title page or by telephone (407) 648-5191.

COOPERATION

The U.S. Geological Survey and agencies of the State of Florida have had cooperative agreements for the collection of water-resource records since 1930. Organizations that assisted in collecting the data in this report through cooperative agreement with the Survey are:

U.S. Army Corps of Engineers, Savannah District
Florida Department of Environmental Regulation
Florida Department of Natural Resources
St. Johns River Water Management District
South Florida Water Management District
Southwest Florida Water Management District
County of Lake
County of Polk
County of St. Johns
City of Cocoa
City of Daytona Beach
City of Edgewater
City of Jacksonville
City of Jacksonville Beach
City of Lake Mary
City of Ocala
City of Port Orange
Jacksonville Electric Authority
Lake County Water Authority
Reedy Creek Improvement District

Assistance with funds or services was given by the U.S. Army Corps of Engineers, Jacksonville District, in collecting records at hydrologic stations throughout the Subdistrict.

Organizations that provided data are acknowledged in station descriptions.

SUMMARY OF HYDROLOGIC CONDITIONS

Rainfall for the water year was below normal over most of the area covered by this report. An exception was the extreme lower part of the St. Johns River basin where total rainfall recorded at Jacksonville (53.90 inches) was 1 inch above normal.

Torrential rainfall in the Jacksonville area from storms during late September resulted in local flooding of many businesses and homes. September rainfall at the Jacksonville weather station (14.37 inches) was 7 inches above average for the month, and served to prevent a deficit total for the year. Maximum rainfalls were centered in areas having no gaging stations. At established gaging stations, no record peak flows occurred.

Streamflow hydrographs for representative gaging stations in the area covered by this report are presented in figures 2-11. These hydrographs are from one station in the St. Marys River basin, three stations in the St. Johns River basin, one in the Fisheating Creek basin, two in the Kissimmee River basin, and three in the Withlacoochee River basin.

Monthly mean streamflow at St. Marys River near Macclenny (fig. 2) during the 1989 water year was below the long-term mean monthly discharge for each month except September.

In the St. Johns River basin, which includes the Oklawaha River, streamflows were generally below mean monthly discharges. At St. Johns River near Cocoa (fig. 3) and Oklawaha River near Conner (fig. 4) monthly streamflows were less than the mean monthly discharge throughout the year. At St. Johns River near De Land (fig. 5), monthly mean streamflow was below the long-term mean monthly discharge for every month except February.

In Fisheating Creek and Kissimmee River basins, runoff was below average. Monthly mean discharges for Fisheating Creek at Palmdale (fig. 6) were less than long-term mean monthly discharges in October, November, January through July, and September. Monthly mean discharges also were below the long-term mean monthly at Reedy Creek near Vineland (fig. 7) for March through September, and Kissimmee River at S-65, near Lake Wales (fig. 8) for October through January and June through September.

In the Withlacoochee River basin, flows were often less than the long-term means. Withlacoochee River near Trilby (fig. 9) and Little Withlacoochee River at Rerdell (fig. 10) had monthly mean discharges less than the long-term mean monthly discharges for the months of October, and March through September; and at Withlacoochee River near Holder (fig 11) monthly mean discharges were less than the long-term mean in November, and March through September.

The mean discharge for the year at all of these representative gaging stations was below the long-term mean annual discharge except for Reedy Creek near Vineland (Kissimmee River basin). The following table presents a summary of mean discharge for the year 1989 water year and mean annual discharges for the long-term base periods.

Station number	Station name	Mean annual discharge		Mean discharge 1989 WY	
		Base period	Discharge (ft^3/s)	(ft^3/s)	Departure from average (percent)
	St. Marys River basin				
02231000	St. Marys River near Macclenny	1927-88	677	190	-72
	St. Johns River basin				
02232400	St. Johns River near Cocoa	1954-88	987	195	-80
02236000	St. Johns River near De Land	1934-88	3,090	1,7[illegible]7	-42
02240000	Oklawaha River near Conner	1931-46, 1978-88	1,150	891	-23
	Fisheating Creek basin				
02256500	Fisheating Creek at Palmdale	1932-88	254	67.5	-73
	Kissimmee River basin				
02266300	Reedy Creek near Vineland	1967-88	33.5	46.2	+38
02268903	Kissimmee River at S-65, near Lake Wales	1934-88	1,042	516	-50
	Withlacoochee River basin				
02312000	Withlacoochee River at Trilby	1931-88	349	247	-29
02312200	Little Withlacoochee River at Rerdell	1959-88	82.8	53.7	-35
02313000	Withlacoochee River near Holder	1932-88	1,077	840	-22

SUMMARY OF HYDROLOGIC CONDITIONS--Continued

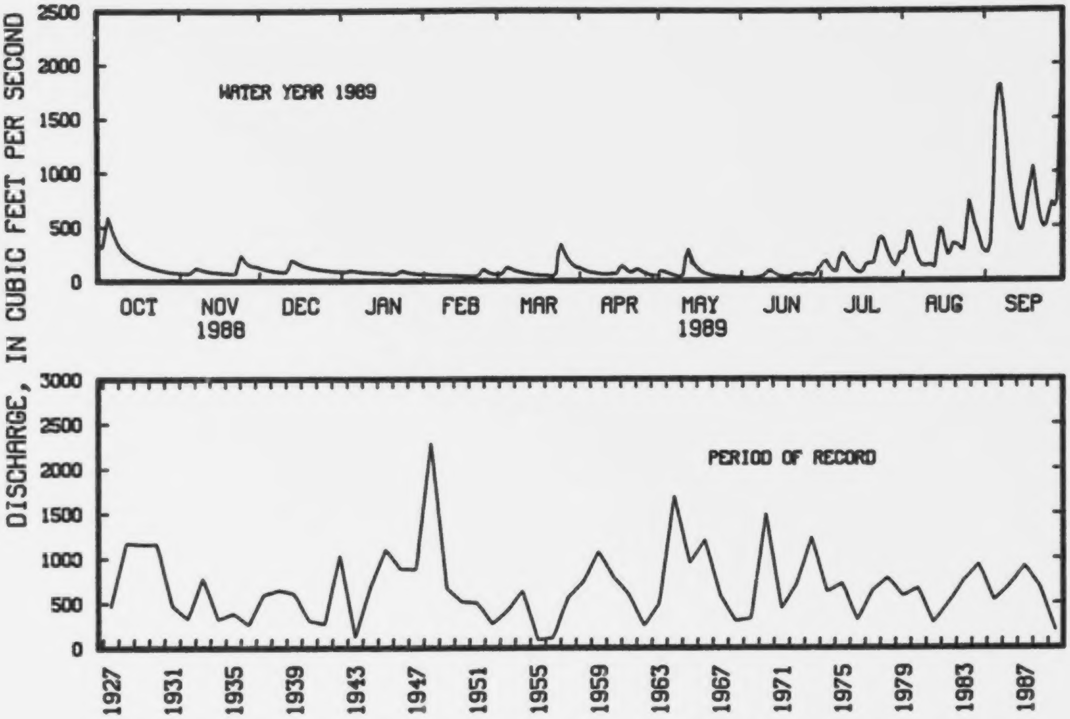


Figure 2.--Water-year and long-term hydrograph for 02231000
St. Marys River near Macclenny, FL.

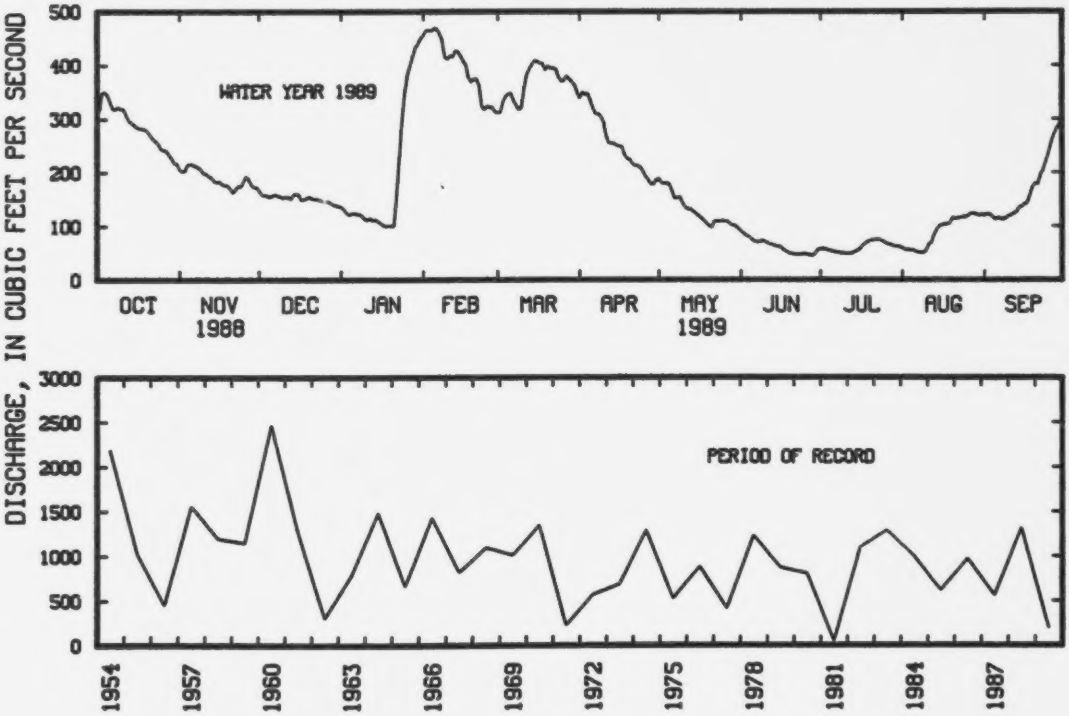


Figure 3.--Water-year and long-term hydrographs for 02232400
St. Johns River near Cocoa, FL.

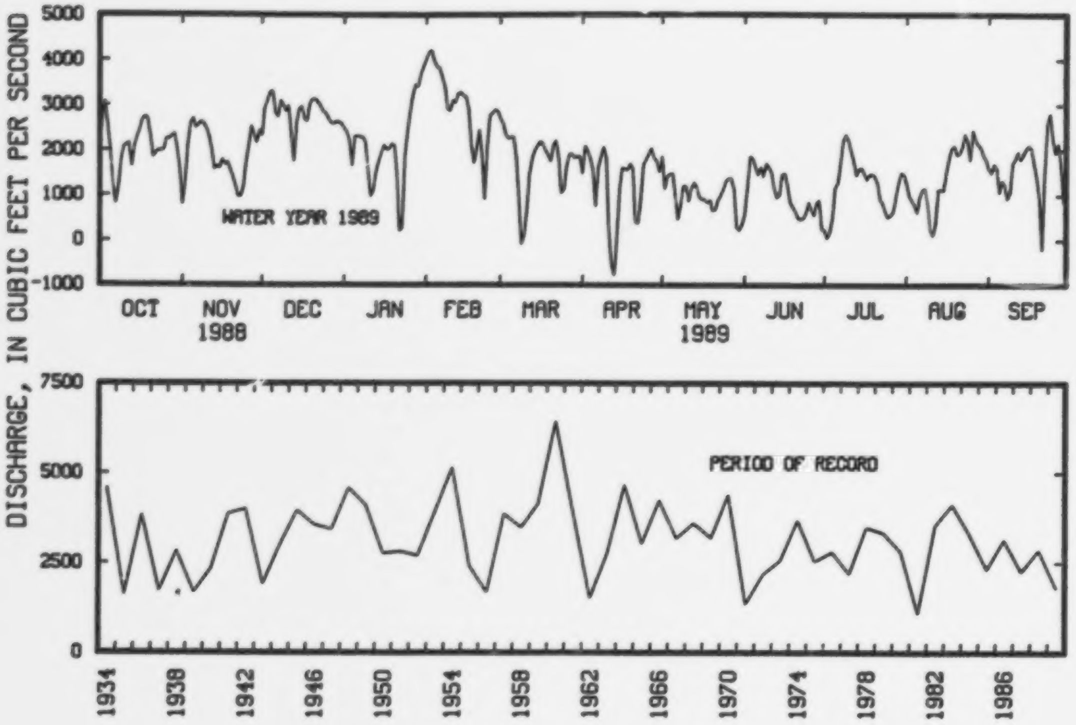


Figure 4.--Water-year and long-term hydrographs for 02236000
St. Johns River near De Land, FL.

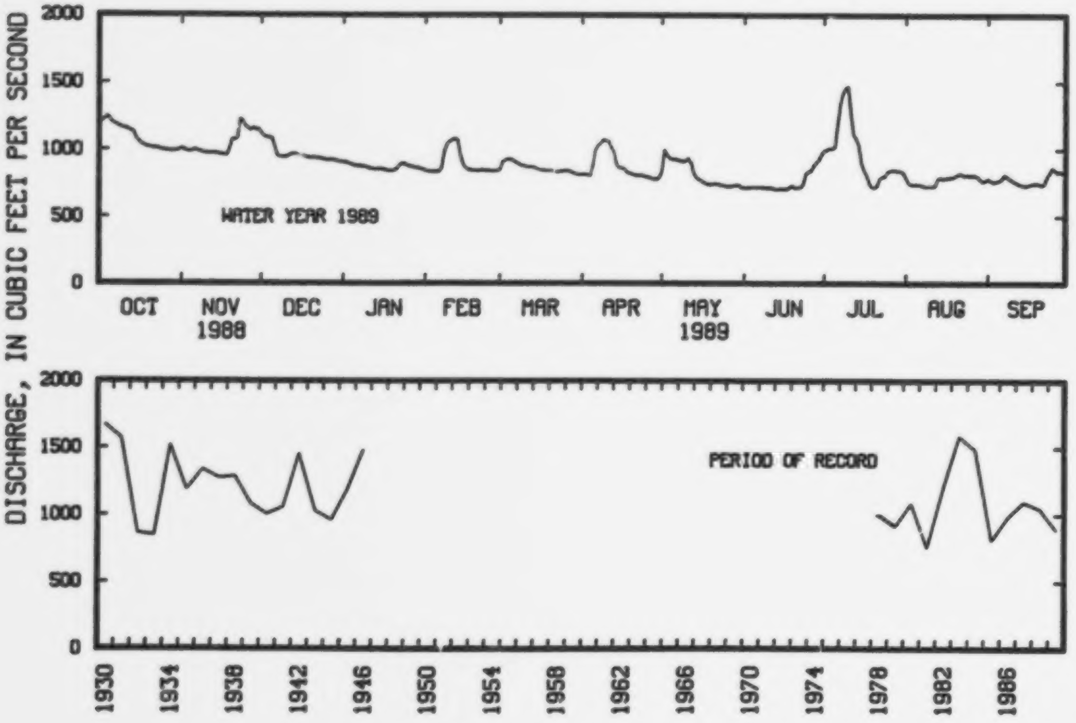


Figure 5.--Water-year and long-term hydrographs for 02240000
Oklawaha River near Conner, FL.

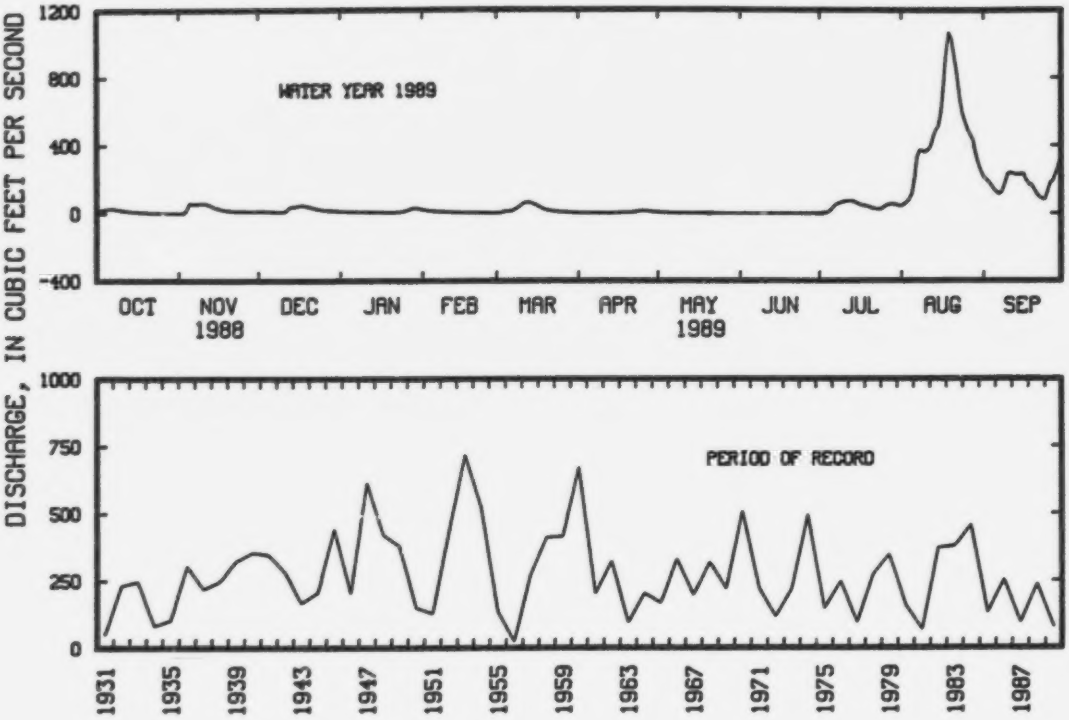


Figure 6.--Water-year and long-term hydrographs for 02256500
Fisheating Creek at Palmdale, FL.

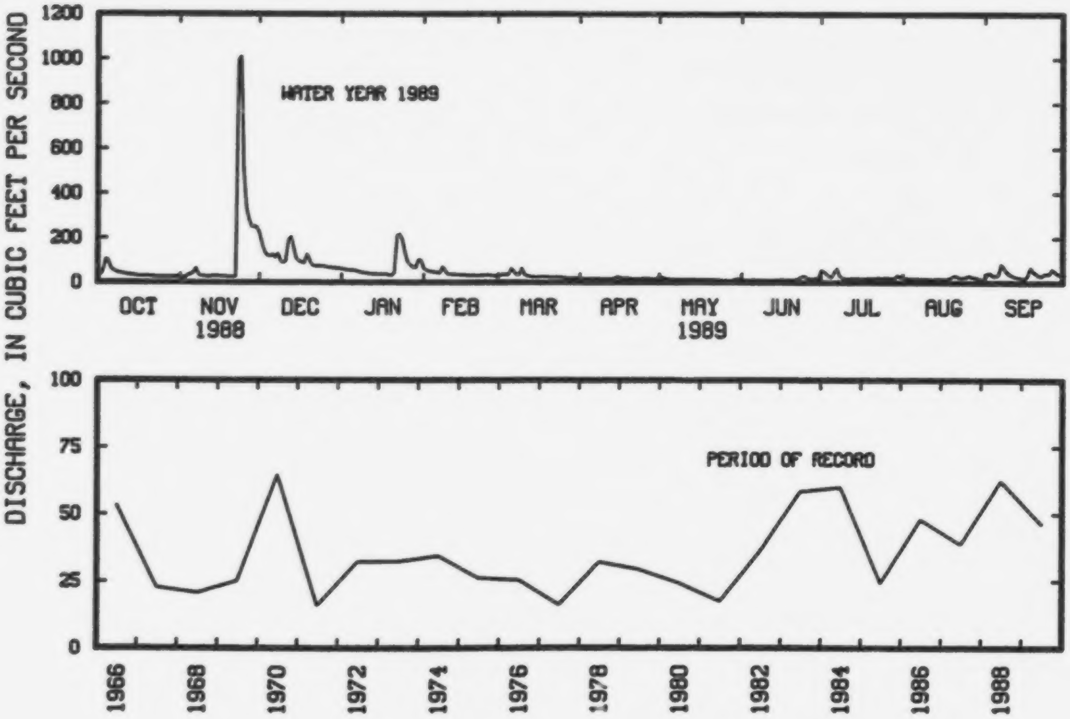


Figure 7.--Water-year and long-term hydrographs for 02266300
Reedy Creek near Vineland, FL.

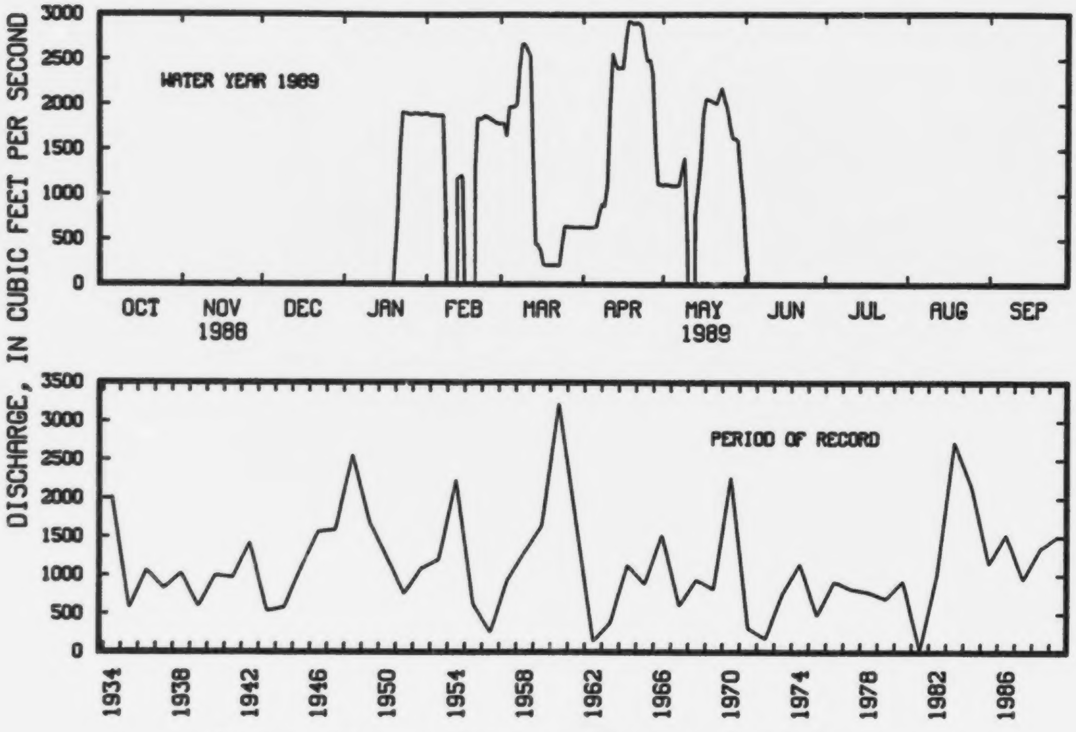


Figure 8.--Water-year and long-term hydrographs for 02268903 Kissimmee River at S-65 near Lake Wales, FL.

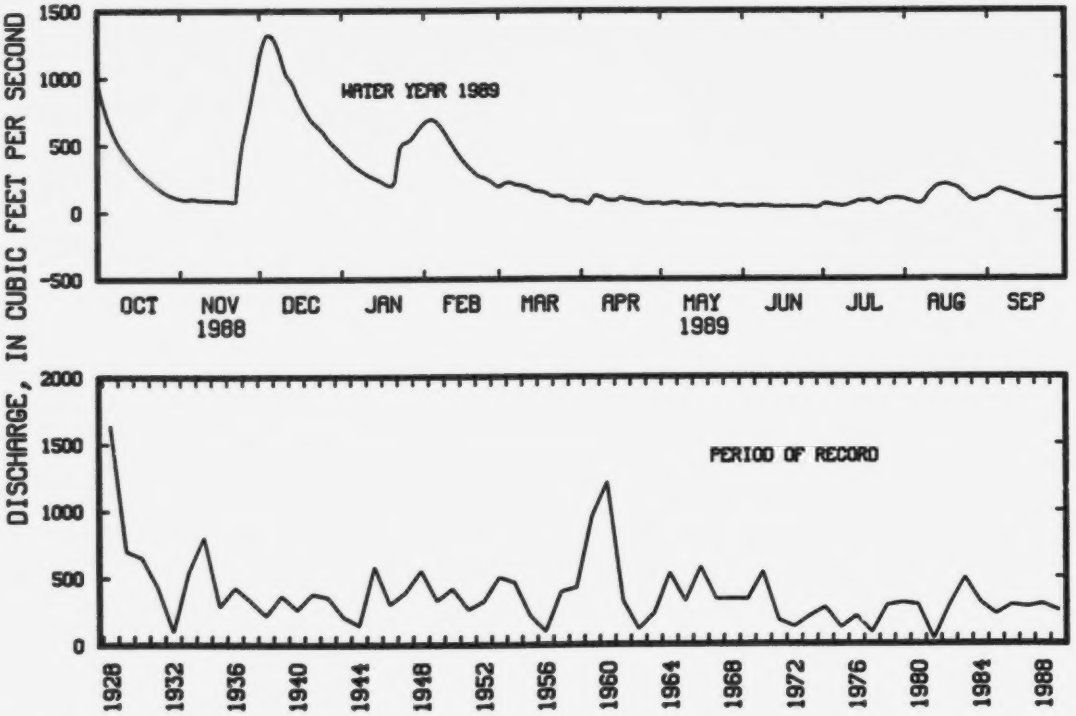


Figure 9.--Water-year and long-term hydrographs for 02312000 Withlacoochee River at Trilby, FL.

SUMMARY OF HYDROLOGIC CONDITIONS--Continued

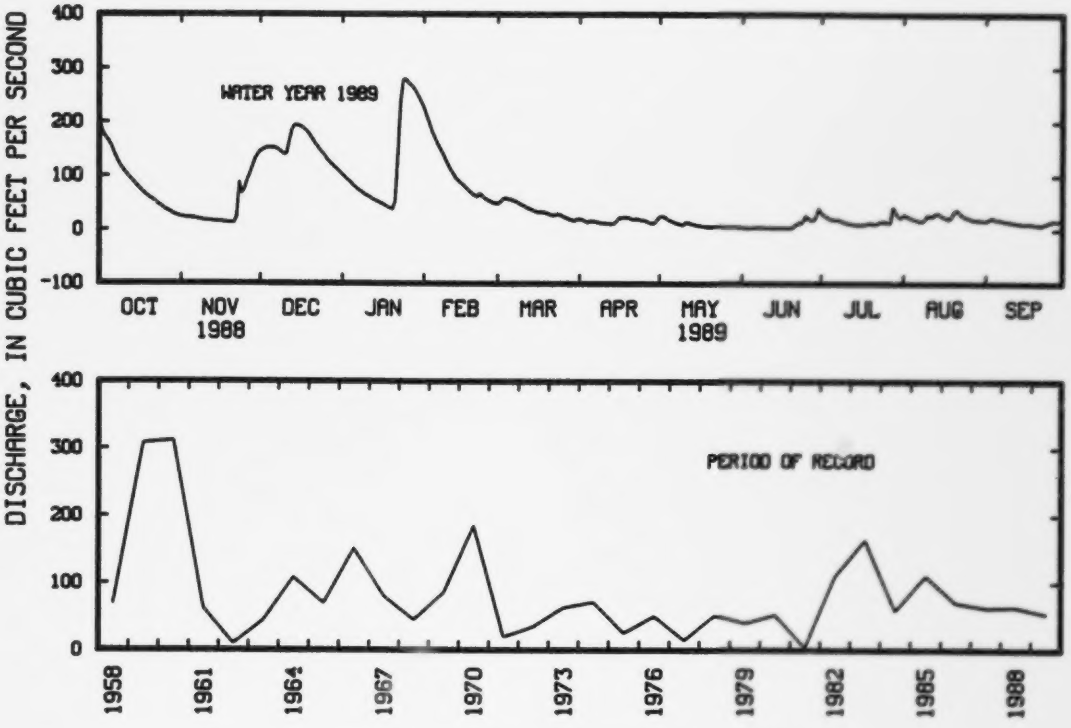


Figure 10.--Water-year and long-term hydrographs for 02312200
Little Withlacoochee River at Rerdell, FL.

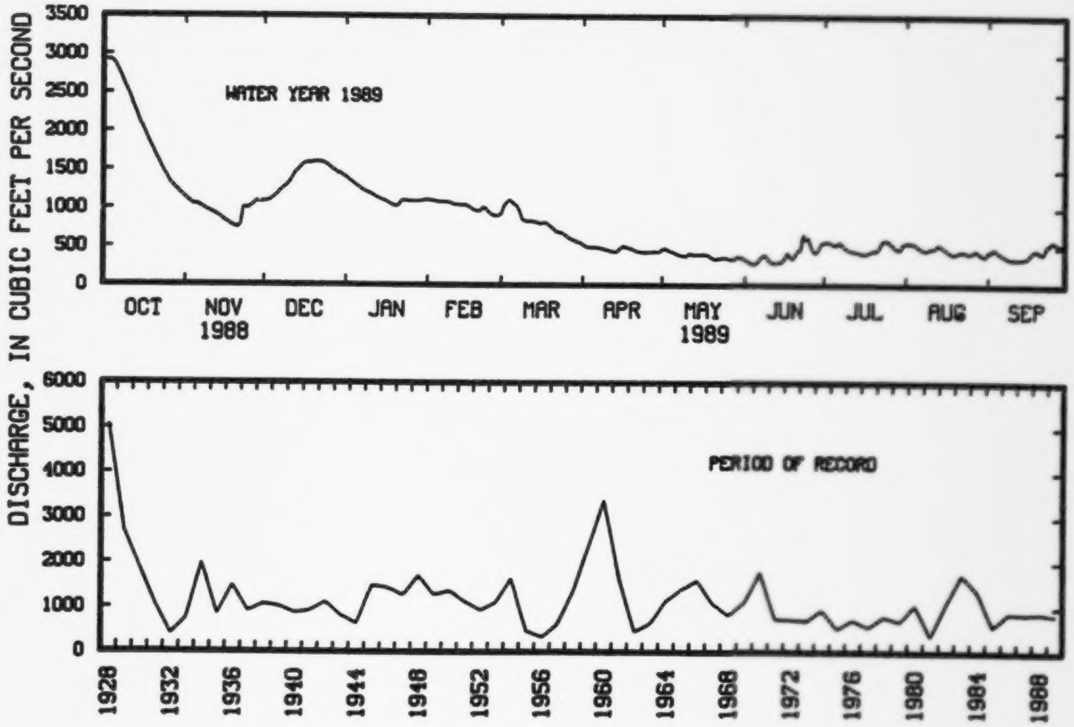


Figure 11.--Water-year and long-term hydrographs for 02313000
Withlacoochee River near Holder, FL.

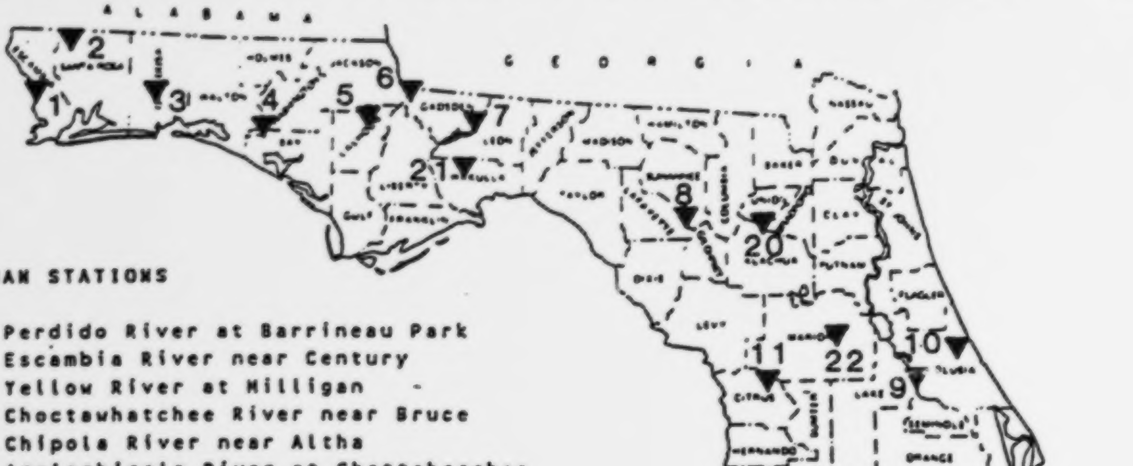
SPECIAL NETWORKS AND PROGRAMS

Hydrologic Bench-Mark Network is a network of 57 sites in small drainage basins around the country whose purpose is to provide consistent data on the hydrology, including water quality, and related factors in representative undeveloped watersheds nationwide, and to provide analyses on a continuing basis to compare and contrast conditions observed in basins more obviously affected by the activities of man.

National Stream Quality Accounting Network (NASQAN) is a nationwide data-collection network designed by the U.S. Geological Survey to meet many of the information needs of government agencies and other groups involved in natural or regional water-quality planning and management. The 500 or so sites in NASQAN are generally located at the downstream ends of hydrologic accounting units designated by the U.S. Geological Survey Office of Water Data Coordination in consultation with the Water Resources Council.

The objectives of NASQAN are (1) to obtain information on the quality and quantity of water moving within and from the United States through a systematic and uniform process of data collection, summarization, analysis, and reporting such that the data may be used for, (2) description of the areal variability of water quality in the Nation's rivers through analysis of data from this and other programs, (3) detection of changes or trends with time in the pattern of occurrence of water-quality characteristics, and (4) providing a nationally consistent data base useful for water-quality assessment and hydrologic research. The NASQAN stations in Florida are shown in figure 12.

Tritium Network is a network of stations which has been established to provide baseline information on the occurrence of tritium in the Nation's surface waters. In addition to the surface-water stations in the network, tritium data are also obtained at a number of precipitation stations. The purpose of the precipitation stations is to provide an estimate sufficient for hydrologic studies of the tritium input to the United States.



NASQAN STATIONS

1. Perdido River at Barrineau Park
2. Escambia River near Century
3. Yellow River at Milligan
4. Choctawhatchee River near Bruce
5. Chipola River near Altha
6. Apalachicola River at Chattahoochee
7. Ochlockonee River near Havana
8. Suwannee River at Branford
9. St. Johns River near Deland
10. Spruce Creek near Samsula
11. Withlacoochee River near Holder
12. Alafia River at Lithia
13. Main Canal at Vero Beach
14. Kissimmee River at S65E near Okeechobee
15. Peace River at Arcadia
16. Fisheating Creek near Palmdale
17. Caloosahatchee Canal at Ortona Lock near Labelle
18. Miami Canal at NW 36th Street, Miami
19. Tamiami Canal-40 mile bend to Monroe
20. Santa Fe River at Worthington Springs
21. Sopchoppy River near Sopchoppy (Hydrologic Benchmark Station)
22. Oklawaha River near Conner

Figure 12.--NASQAN stations in the State of Florida.

EXPLANATION OF THE RECORDS

The surface-water and ground-water records published in this report are for the 1989 water year that began October 1, 1988, and ended September 30, 1989. A calendar of the water year is provided on the inside of the front cover. The records contain streamflow data, stage and content data for lakes and reservoirs, water-quality data for surface and ground water, and ground-water-level data. The following sections of the introductory text are presented to provide users with a more detailed explanation of how the hydrologic data published in this report were collected, analyzed, computed, and arranged for presentation.

Station Identification Numbers

Each data station, whether streamsite or well, in this report is assigned a unique identification number. The number usually is assigned when a station is first established and is retained for that station indefinitely. The systems used by the U.S. Geological Survey to assign identification numbers for surface-water stations and for ground-water well sites differ, but both are based on geographic location. The "downstream order" system is used for regular surface-water stations and the "latitude-longitude" system is used for wells and for surface-water stations where only miscellaneous observations are made.

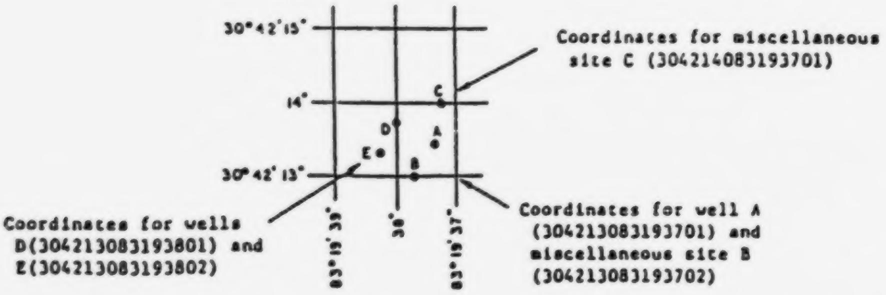
Downstream Order System

Since October 1, 1950, the order of listing hydrologic-station records in Survey reports is in a downstream direction along the main stream. All stations on a tributary entering upstream from a mainstream station are listed before that station. A station on a tributary that enters between two mainstream stations is listed between them. A similar order is followed in listing stations on first rank, second rank, and other ranks of tributaries. The rank of any tributary with respect to the stream to which it is immediately tributary is indicated by an indention in the "List of Stations" in the front of this report. Each indention represents one rank. This downstream order and system of indention shows which stations are on tributaries between any two stations and the rank of the tributary on which each station is situated.

The station-identification number is assigned according to downstream order. In assigning station numbers, no distinction is made between partial-record stations and other stations; therefore, the station number for a partial-record station indicates downstream-order position in a list made up of both types of stations. Gaps are left in the series of numbers to allow for new stations that may be established; hence, the numbers are not consecutive. The complete 8-digit number for each station, such as 02228500, which appears just to the left of the station name, includes the 2-digit part number "02" plus the 6- to 12-digit downstream-order number "228500." The part number designates the major river basin; for example, part "02" is the South Atlantic Slope and eastern Gulf of Mexico basins.

Latitude-Longitude System

The identification numbers for wells and miscellaneous surface-water sites are assigned according to the grid system of latitude and longitude. The number consists of 15 digits. The first six digits denote the degrees, minutes, and seconds of latitude, the next seven digits denote degrees, minutes, and seconds of longitude, and the last two digits (assigned sequentially) identify the wells or other sites within a 1-second grid. This site-identification number, once assigned, is a pure number and has no locational significance. In the rare instance where the initial determination of latitude and longitude are found to be in error, the station will retain its initial identification number; however, its true latitude and longitude will be listed in the LOCATION paragraph of the station description. (See figure below.)



Coordinates for miscellaneous site C (304214083193701)

Coordinates for wells D(304213083193801) and E(304213083193802)

Coordinates for well A (304213083193701) and miscellaneous site B (304213083193702)

Figure 13.--System for numbering wells and miscellaneous sites. (latitude and longitude)

Records of Stage and Water Discharge

Records of stage and water discharge may be complete or partial. Complete records of discharge are those obtained using a stage-recording device through which either instantaneous or mean daily discharges may be computed for any time, or any period of time, during the period of record. Complete records of lake elevation, similarly, are those for which stage may be computed or estimated with reasonable accuracy for any time, or period of time. They may be obtained using a stage-recording device or daily or weekly observations, but need not be. Because daily mean discharges and lake elevations commonly are published for such stations, they are referred to as "daily stations."

By contrast, partial records are obtained through discrete measurements without using a continuous stage-recording device and pertain only to a few flow characteristics, or perhaps only one. The nature of the partial record is indicated by table titles such as "Crest-stage partial records," or "Low-flow partial records." Records of miscellaneous discharge measurements or of measurements from special studies, such as low-flow seepage studies, may be considered as partial records, but they are presented separately in this report.

Location of all complete-record and partial-record stations for which data are given in this report are shown in figures preceding each sub-basin.

Data Collection and Computation

The data obtained at a complete-record gaging station on a stream or canal consist of a record of stage, individual measurements of discharge throughout a range of stages, and notations regarding factors that may affect the relationships between stage and discharge. These data, together with supplemental information, such as weather records, are used to compute daily mean discharges.

Records of stage are obtained with analog recorders that trace continuous graphs of stage or with digital recorders that punch stage values on paper tapes at selected time intervals. Measurements of discharge are made with current meters using methods adopted by the Geological Survey as a result of experience accumulated since 1880. These methods are described in standard textbooks, in Water-Supply Paper 2175, and in U.S. Geological Survey Techniques of Water-Resources Investigations, Book 3, Chapter A6.

In computing discharge records, results of individual measurements are plotted against the corresponding stages, and stage-discharge relation curves are then constructed. From these curves, rating tables indicating the approximate discharge for any stage within the range of the measurements are prepared. If it is necessary to define extremes of discharge outside the range of the current-meter measurements, the curves are extended using: (1) logarithmic plotting; (2) velocity-area studies; (3) results of indirect measurements of peak discharge, such as slope-area or contracted-opening measurements, and computations of flow over dams or weirs; or (4) step-backwater techniques.

Daily mean discharges are computed by applying the daily mean stages (gage heights) to the stage-discharge curves or tables. If the stage-discharge relation is subject to change because of frequent or continual change in the physical features that form the control, the daily mean discharge is determined by the shifting-control method, in which correction factors based on the individual discharge measurements and notes of the personnel making the measurements are applied to the gage heights before the discharges are determined from the curves or tables. This shifting-control method also is used if the stage-discharge relation is changed temporarily because of aquatic growth or debris on the control. For some stations, formation of ice in the winter may so obscure the stage-discharge relations that daily mean discharges must be estimated from other information such as temperature and precipitation records, notes of observations, and records for other stations in the same or nearby basins for comparable periods.

At some stream-gaging stations, the stage-discharge relation is affected by the backwater from reservoirs, tributary streams, or other sources. This necessitates the use of the slope method in which the slope or fall in a reach of the stream is a factor in computing discharge. The slope or fall is obtained by means of an auxiliary gage set at some distance from the base gage. At some stations the stage-discharge relation is affected by changing stage; at these stations the rate of change in stage is used as a factor in computing discharge.

In computing records of lake or reservoir contents, it is necessary to have available from surveys, curves or tables defining the relationship of stage and content. The application of stage to the stage-content curves or tables gives the contents from which daily, monthly, or yearly changes then are determined. If the stage-content relationship changes because of deposition of sediment in a lake or reservoir, periodic resurveys may be necessary to redefine the relationship. Even when this is done, the contents computed may become increasingly in error as the lapsed time since the last survey increases. Discharges over lake or reservoir spillways are computed from stage-discharge relationships much as other stream discharges are computed.

For some gaging stations, there are periods when no gage-height record is obtained, or the recorded gage height is so faulty that it cannot be used to compute daily discharge or contents. This happens when the recorder stops or otherwise fails to operate properly, intakes are plugged, the float is frozen in the well, or for various other reasons. For such periods, the daily discharges are estimated from the recorded range in stage, previous or following record, discharge measurements, weather records, and comparison with other station records from the same or nearby basins. Likewise, daily contents may be estimated from operator's logs, previous or following record, inflow-outflow studies, and other information. Information explaining how estimated daily-discharge values are identified in station records is included in the next two sections, "Data Presentation" (REMARKS paragraph) and "Identifying Estimated Daily Discharge."

Data Presentation

The records published for each gaging station consist of two parts, the manuscript or station description and the data table for the current water year. The manuscript provides, under various headings, descriptive information, such as station location, period of record, average discharge, historical extremes, record accuracy, and other remarks pertinent to station operation and regulation. The following information, as appropriate, is provided with each continuous record of discharge or lake content. Comments to follow clarify information presented under the various headings of the station description.

LOCATION.--Information on locations is obtained from the most accurate base maps available. The location of the gage with respect to the cultural and physical features in the vicinity and with respect to the reference place mentioned in the station name is given.

DRAINAGE AREA.--Drainage areas are delineated and measured using the most accurate topographic maps available, and are updated as necessary.

PERIOD OF RECORD.--This indicates the period for which there are published records for the station or for an equivalent station. An equivalent station is one that was in operation at a time that the present station was not, and whose location was such that records from it can reasonably be considered equivalent with records from the present station.

REVISED RECORDS.--Published records, because of new information, occasionally are found to be incorrect, and revisions are printed in later reports. Listed under this heading are all the reports in which revisions have been published for the station and the water years to which the revisions apply. If a revision did not include daily, monthly, or annual figures of discharge, that fact is noted after the year dates as follows: "(M)" means that only the instantaneous maximum discharge was revised; "(m)" that only the instantaneous minimum was revised; and "(P)" that only peak discharges were revised. If the drainage area has been revised, the report in which the most recently revised figure was first published is given.

GAGE.--The type of gage in current use, the datum of the current gage referred to National Geodetic Vertical Datum of 1929 (see DEFINITION OF TERMS), and a condensed history of the types, locations, and datums of previous gages are given under this heading.

REMARKS.--All periods of estimated daily-discharge record will either be identified by date in this paragraph of the station description for water-discharge stations or flagged in the daily-discharge table. (See next section, "Identifying Estimated Daily Discharge.") If a remarks statement is used to identify estimated record, the paragraph will begin with this information presented as the first entry. The paragraph is also used to present information relative to the accuracy of the records, to special methods of computation, to conditions that affect natural flow at the station and, possibly, to other pertinent items. For reservoir stations, information is given on the dam forming the reservoir, the capacity, outlet works and spillway, and purpose and use of the reservoir.

COOPERATION.--Records provided by a cooperating organization or obtained for the Geological Survey by a cooperating organization are identified here.

AVERAGE DISCHARGE.--The discharge value given is the arithmetic mean of the water-year mean discharges. It is computed only for stations having at least 5 water years of complete record, and only water years of complete record are included in the computation. It is not computed for stations where diversions, storage, or other water-use practices cause the value to be meaningless. If water developments significantly altering flow at a station are put into use after the station has been in operation for a period of years, a new average is computed as soon as 5 water years of record have accumulated following the development. The median of yearly mean discharges also is given under this heading for stations having 10 or more water years of record, if the median differs from the average given by more than 10 percent.

EXTREMES FOR PERIOD OF RECORD.--Extremes may include maximum and minimum stages and maximum and minimum discharges or content. Unless otherwise qualified, the maximum discharge or content is the instantaneous maximum corresponding to the highest stage that occurred. The highest stage may have been obtained from a graphic or digital recorder, a crest-stage gage, or by direct observation of a nonrecording gage. If the maximum stage did not occur on the same day as the maximum discharge or content, it is given separately. Similarly, the minimum is the instantaneous minimum discharge, unless otherwise qualified, and was determined and is reported in the same manner as the maximum.

EXTREMES OUTSIDE PERIOD OF RECORD.--Included here is information concerning major floods or unusually low flows that occurred outside the stated period of record. The information may or may not have been obtained by the U.S. Geological Survey.

EXTREMES FOR CURRENT YEAR.--Extremes given here are similar to those for the period of record, except the peak discharge listing may include secondary peaks. For stations meeting certain criteria, all peak discharges and stages occurring during the water year and greater than a selected base discharge are presented under this heading. The peaks greater than the base discharge, excluding the highest one, are referred to as secondary peaks. Peak discharges are not published for canals, ditches, drains, or streams for which the peaks are subject to substantial control by man. The time of occurrence for peaks is expressed in 24-hour local standard time. For example, 12:30 a.m. is 0030, and 1:30 p.m. is 1330. The minimum for the current water year appears below the table of peak data.

REVISIONS.--If a critical error in published records is discovered, a revision is included in the first report published following discovery of the error.

Although rare, occasionally the records of a discontinued gaging station may need revision. Because, for these stations, there would be no current or, possibly, future station manuscript published to document the revision in a "Revised Records" entry, users of data for these stations who obtained the record from previously published data reports may wish to contact the offices whose addresses are given on the back of the title page of this report to determine if the published records were ever revised after the station was discontinued. Of course, if the data were obtained by computer retrieval, the data would be current and there would be no need to check because any published revision of data is always accompanied by revision of the corresponding data in computer storage.

Manuscript information for lake or reservoir stations differs from that for stream stations in the nature of the "Remarks" and in the inclusion of a skeleton stage-capacity table when daily contents are given.

The daily table for stream-gaging stations gives mean discharge for each day and is followed by monthly and yearly summaries. In the monthly summary below the daily table, the line headed "TOTAL" gives the sum of the daily figures. The line headed "MEAN" gives the average flow in cubic foot per second during the month. The lines headed "MAX" and "MIN" give the maximum and minimum daily discharges, respectively, for the month. Discharge for the month also is usually expressed in cubic foot per second per square mile (line headed "CFSM"), or in inches (line headed "IN."), or in acre-feet (line headed "AC-FT"). Figures for cubic foot per second per square mile and runoff in inches are omitted if there is extensive regulation or diversion or if the drainage area includes large noncontributing areas. In the yearly summary below the monthly summary, the figures shown are the appropriate discharges for the calendar and water years. At some stations monthly and (or) yearly observed discharges are adjusted for reservoir storage or diversion, or diversions or reservoir contents are given. These figures are identified by a symbol and corresponding footnote.

Data collected at partial-record stations follow the information for continuous-record sites. Data for partial-record discharge stations are presented in two tables. The first is a table of annual maximum stage and discharge at crest-stage stations, and the second is a table of discharge measurements at low-flow partial-record stations. The tables of partial-record stations are followed by a listing of discharge measurements made at sites other than continuous-record or partial-record stations. These measurements are generally made in times of drought or flood to give better areal coverage to those events. Those measurements and others collected for some special reason are called measurements at miscellaneous sites.

Identifying Estimated Daily Discharge

Estimated daily-discharge values published in the water-discharge tables of annual State data reports are identified either by flagging individual daily values with the letter symbol "e" and printing a table footnote, "e Estimated," or by listing the dates of the estimated record in the REMARKS paragraph of the station description.

Accuracy of the Records

The accuracy of streamflow records depends primarily on: (1) The stability of the stage-discharge relation or, if the control is unstable, the frequency of discharge measurements; and (2) the accuracy of measurements of stage, measurements of discharge, and interpretation of records.

The accuracy attributed to the records is indicated under "REMARKS." "Excellent" means that about 95 percent of the daily discharges are within 5 percent of their true values; "good," within 10 percent; and "fair," within 15 percent. Records that do not meet the criteria mentioned are rated "poor." Different accuracies may be attributed to different parts of a given record.

Daily mean discharges in this report are given to the nearest hundredth of a cubic foot per second for values less than 1.0 ft^3/s; to the nearest tenth between 1.0 and 10 ft^3/s; to whole numbers between 10 and 1,000 ft^3/s; and to 3 significant figures for more than 1,000 ft^3/s. The number of significant figures used is based solely on the magnitude of the discharge value. The same rounding rules apply to discharges listed for partial-record stations and miscellaneous sites.

Discharge at many stations, as indicated by the monthly mean, may not reflect natural runoff due to the effects of diversion, consumption, regulation by storage, increase or decrease in evaporation due to artificial causes, or to other factors. For such stations, figures of cubic foot per second per square mile and of runoff, in inches, are not published unless satisfactory adjustments can be made for diversions, for changes in contents of reservoirs, or for other changes incident to use and control. Evaporation from a reservoir is not included in the adjustments for changes in reservoir contents, unless it is so stated. Even at those stations where adjustments are made, large errors in computed runoff may occur if adjustments or losses are large in comparison with the observed discharge.

Other Records Available

Information used in the preparation of the records in this publication, such as discharge-measurement notes, gage-height records, temperature measurements, and rating tables is on file in the Orlando Subdistrict office of the Florida District. Also, most of the daily mean discharges are in computer-readable form and have been analyzed statistically. Information on the availability of the unpublished information or on the results of statistical analyses of the published records may be obtained from the offices whose addresses are given on the back of the title page of this report.

Records of Surface-Water Quality

Records of surface-water quality ordinarily are obtained at or near stream-gaging stations because interpretation of records of surface-water quality nearly always requires corresponding discharge data. Records of surface-water quality in this report may involve a variety of types of data and measurement frequencies.

Accuracy of the Records

In March 1989 the National Water-Quality Laboratory uncovered a bias in the turbidimetric method for sulfate analyses made from 1982 through 1989. Sulfate values below 75 mg/L as determined by the turbidimetric method have a median positive bias of 2 mg/L above the true value. In this report, sulfate values for NASQAN stations were determined using the turbidimetric method, and the data have not been corrected for this bias. Sulfate values for non-NASQAN stations in this report were determined in the Florida District QW Services unit using the chromatograph method and these data are not biased.

Classification of Records

Water-quality data for surface-water sites are grouped into one of three classifications. A continuing-record station is a site where data are collected on a regularly scheduled basis. Frequency may be once or more times daily, weekly, monthly, or quarterly. A partial-record station is a site where water-quality data are collected systematically over a period of years, usually less frequently than quarterly. A miscellaneous sampling site is a location other than a continuing or partial-record station where random samples are collected to give better areal coverage to define water-quality conditions in the river basin.

A careful distinction needs to be made between "continuing records," as used in this report, and "continuous recordings," which refers to a continuous graph or a series of discrete values punched at short intervals on a paper tape. Some records of water quality, such as temperature and specific conductance, may be obtained through continuous recordings; however, because of costs, most data are obtained only monthly or less frequently.

Arrangement of Records

Water-quality records collected at a surface-water daily record station or a periodic observation station are published immediately following that record, regardless of the frequency of sample collection. Station number and name are the same for both records. Where a surface-water daily record station is not available or where the water quality differs significantly from that at the nearby surface-water station, the continuing water-quality record is published with its own station number and name in the regular downstream-order sequence. Water-quality data for partial-record stations and for miscellaneous sampling sites appear in separate tables following the table of discharge measurements at miscellaneous sites.

Onsite Measurements and Sample Collection

In obtaining water-quality data, a major concern is assuring that the data obtained represent the quality of the water in its natural state. To assure this, certain measurements, such as water temperature, pH, alkalinity, specific conductance, and dissolved oxygen, need to be made onsite when the samples are taken. To assure that measurements made in the laboratory also represent the natural water, carefully prescribed procedures need to be followed in collecting the samples, in treating the samples to prevent changes in quality pending analysis, and in shipping the samples to the laboratory. Procedures for onsite measurements and for collecting, treating, and shipping samples are given in publications on "Techniques of Water-Resources Investigations," Book 1, Chap. D2; Book 3, Chap. C2; Book 5, Chap. A1, A3, and A4. All of these references are listed under "PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS" which appears at the end of the introductory text. Also, detailed information on collecting, treating, and shipping samples may be obtained from the Geological Survey office.

One sample can define adequately the water quality at a given time if the mixture of solutes throughout the stream cross section is homogeneous. However, the concentration of solutes at different locations in the cross section may vary widely with different rates of water discharge, depending on the source of material and the turbulence and mixing of the stream. Some streams must be sampled through several vertical sections to obtain a representative sample needed for an accurate mean concentration and for use in calculating load. All samples obtained for the National Stream Quality Accounting Network (see definitions) are obtained from at least several verticals. Whether samples are obtained from the centroid of flow or from several verticals depends on flow conditions and other factors which must be evaluated by the collector.

Chemical-quality data published in this report are considered to be the most representative values available for the stations listed. The values reported represent water-quality conditions at the time of sampling as much as possible, consistent with available sampling techniques and methods of analysis. In the rare case where an apparent inconsistency exists between a reported pH value and the relative abundance of carbon dioxide species (carbonate and bicarbonate), the inconsistency is the result of a slight uptake of carbon dioxide from the air by the sample between measurement of pH in the field and determination of carbonate and bicarbonate in the laboratory.

For stations equipped with water-quality monitors, the records consist of daily mean values for each constituent measured and are based upon unit values (hourly or 15-minute recordings). These unit values may be obtained from the Orlando Subdistrict, 224 West Center Street, Suite 1006, Altamonte Springs, FL 32714.

Water Temperature

Water temperatures are measured at most of the water-quality stations. In addition, water temperatures are taken at time of discharge measurements for water-discharge stations. For stations where water temperatures are taken manually once or twice daily, the water temperatures are taken at about the same time each day. Large streams have a small diurnal temperature change; shallow streams may have a daily range of several degrees and may follow closely the changes in air temperature. Some streams may be affected by waste-heat discharges.

Sediment

Suspended-sediment concentrations are determined from samples collected by using depth-integrating samplers. Samples usually are obtained at several verticals in the cross section, or a single sample may be obtained at a fixed point and a coefficient applied to determine the mean concentration in the cross sections.

During periods of rapidly changing flow or rapidly changing concentration, samples may have been collected more frequently (twice daily or, in some instances, hourly). The published sediment discharges for days of rapidly changing flow or concentration were computed by the subdivided-day method (time-discharge weighted average). Therefore, for those days when the published sediment discharge value differs from the value computed as the product of discharge times mean concentration times 0.0027, the reader can assume that the sediment discharge for that day was computed by the subdivided-day method. For periods when no samples were collected, daily discharges of suspended sediment were estimated on the basis of water discharge, sediment concentrations observed immediately before and after the periods, and suspended-sediment loads for other periods of similar discharge.

At other stations, suspended-sediment samples were collected periodically at many verticals in the stream cross section. Although data collected periodically may represent conditions only at the time of observations, such data are useful in establishing seasonal relations between quality and streamflow and in predicting long-term sediment-discharge characteristics of the stream.

In addition to the records of suspended-sediment discharge, records of the periodic measurements of the particle-size distribution of the suspended sediment and bed material are included for some stations.

Laboratory Measurements

Sediment samples, samples for biochemical-oxygen demand (BOD), samples for indicator bacteria, and daily samples for specific conductance are analyzed locally. All other samples are analyzed in the Geological Survey laboratory in Arvada, Colorado. Methods used in analyzing sediment samples and computing sediment records are given in TWRI, Book 5, Chap. C1. Methods used by the Geological Survey laboratory are given in TWRI, Book 1, Chap. D2; Book 3, Chap. C2; Book 5, Chap. A1, A3, and A4.

Data Presentation

For continuing-record stations, information pertinent to the history of station operation is provided in descriptive headings preceding the tabular data. These descriptive headings give details regarding location, drainage area, period of record, type of data available, instrumentation, general remarks, cooperation, and extremes for parameters currently measured daily. Tables of chemical, physical, biological, radiochemical data, and so forth, obtained at a frequency less than daily are presented first. Tables of "daily values" of specific conductance, pH, water temperature, dissolved oxygen, and suspended sediment then follow in sequence.

In the descriptive headings, if the location is identical to that of the discharge gaging station, neither the LOCATION nor the DRAINAGE AREA statements are repeated. The following information, as appropriate, is provided with each continuous-record station. Comments that follow clarify information presented under the various headings of the station description.

LOCATION.--See Data Presentation under "Records of Stage and Water Discharge"; same comments apply.

DRAINAGE AREA.--See Data Presentation under "Records of Stage and Water Discharge"; same comments apply.

PERIOD OF RECORD.--This indicates the periods for which there are published water-quality records for the station. The periods are shown separately for records of parameters measured daily or continuously and those measured less than daily. For those measured daily or continuously, periods of record are given for the parameters individually.

INSTRUMENTATION.--Information on instrumentation is given only if a recording or sampling device, which may be time- or event-activated, is in operation at a station.

REMARKS.--Remarks provide added information pertinent to the collection, analysis, or computation of the records.

COOPERATION.--Records provided by a cooperating organization or obtained for the Geological Survey by a cooperating organization are identified here.

EXTREMES.--Maximums and minimums are given only for parameters measured daily or more frequently. None are given for parameters measured weekly or less frequently, because the true maximums or minimums may not have been sampled. Extremes, when given, are provided for both the period of record and for the current water year.

REVISIONS.--If errors in published water-quality records are discovered after publication, appropriate updates are made to the Water-Quality File in the U.S. Geological Survey's computerized data system, WATSTORE, and subsequently by monthly transfer of update transactions to the U.S. Environmental Protection Agency's STORET system. Because the usual volume of updates makes it impractical to document individual changes in the State data-report series or elsewhere, potential users of U.S. Geological Survey water-quality data are encouraged to obtain all required data from the appropriate computer file to ensure the most recent updates.

Remark Codes

The following remark codes may appear with the water-quality data in this report:

Printed output	Remark
E	Estimated value
>	Actual value is known to be greater than the value shown
<	Actual value is known to be less than the value shown
K	Results based on colony count outside the acceptance range (non-ideal colony count)
L	Biological organism count less than 0.5 percent (organism may be observed rather than counted)
D	Biological organism count equal to or greater than 15 percent (dominant)
&	Biological organism estimated as dominant

Records of Ground-Water Levels

Ground-water level data from a statewide network of observation wells are published herein. The records include data from wells equipped with water-level recorders and data from wells where water levels are measured periodically.

Data Collection and Computation

Measurements of water levels are made in many types of wells under varying conditions, but the methods of measurement are standardized to the extent possible. The equipment and measuring techniques used at each observation well ensure that measurements at each well are of consistent accuracy and reliability.

Tables of water-level data are presented by counties arranged in alphabetical order. The prime identification number for a given well is the 15-digit number that appears in the upper left corner of the table.

Water-level records are obtained from direct measurements with a steel tape, pressure gage, manometer, or from the graph or punched tape of a water-level recorder. The measurements in this report are given in feet above National Geodetic Vertical Datum of 1929 or in some tables as feet below land-surface datum. Land-surface datum is a datum plane that is approximately at land surface at each well. The elevation of the land-surface datum is given in the well description. The height of the measuring point (MP) above or below land-surface datum is given in each well description.

Water levels are reported to as many significant figures as can be justified by the local conditions. For example, in a measurement of a depth to water of several hundred feet, the error of determining the absolute value of the total depth to water may be a few tenths of a foot, whereas the error in determining the net change of water level between successive measurements may be only a few hundredths of a foot. For lesser depths to water, the accuracy is greater. Accordingly, most measurements are reported to a hundredth of a foot, but some are given to a tenth of a foot or a larger unit.

Data Presentation

Each well record consists of two parts, the station description and the data table of water levels observed during the water year. The description of the well is presented first through use of descriptive headings preceding the tabular data. The comments to follow clarify information presented under the various headings.

LOCATION.--This paragraph follows the well-identification number and reports the latitude and longitude (given in degrees, minutes, and seconds); a landline location designation; the hydrologic-unit number; the distance and direction from a geographic point of reference; and the owner's name.

AQUIFER.--This entry designates by name (if a name exists) and geologic age the aquifer(s) open to the well.

WELL CHARACTERISTICS.--This entry describes the well in terms of depth, diameter, casing depth and/or screened interval, method of construction, use, and additional information such as casing breaks, collapsed screen, and other changes since construction.

INSTRUMENTATION.--This paragraph provides information on both the frequency of measurement and the collection method used, allowing the user to better evaluate the reported water-level extremes by knowing whether they are based on hourly, daily, weekly, monthly, or some other frequency of measurement.

DATUM.--This entry describes both the measuring point and the land-surface elevation at the well. The measuring point is described physically (such as top of collar, notch in top of casing, plug in pump base and so on), and in relation to land surface (such as 1.3 ft above land-surface datum). The elevation of the land-surface datum is described in feet above (or below) National Geodetic Vertical Datum of 1929 (NGVD of 1929); it is reported with a precision depending on the method of determination.

REMARKS.--This entry describes factors that may influence the water level in a well or the measurement of the water level.

PERIOD OF RECORD.--This entry indicates the period for which there are published records for the well. It reports the month and year of the start of publication of water-level records by the U.S. Geological Survey and the words "to current year" if the records are to be continued into the following year. Periods for which water-level records are available, but are not published by the Geological Survey, may be noted.

EXTREMES FOR PERIOD OF RECORD.--This entry contains the highest and lowest water levels of the period of record, with reference to National Geodetic Vertical Datum of 1929, and the dates of their occurrence.

A table of water levels follows the station description for each well. For wells equipped with recorders, only abbreviated tables are published; generally, daily maximums are listed for every fifth day and at the end of the month (eom). The highest and lowest water levels of the water year and their dates of occurrence are shown on a line below the abbreviated table. Because all values are not published for wells with recorders, the extremes may be values that are not listed in the table. Missing records are indicated by dashes in place of the water level.

Records of Ground-Water Quality

Records of ground-water quality in this report differ from other types of records in that, for most sampling sites, they consist of only one set of measurements for the water year. The quality of ground water ordinarily changes slowly; therefore, for most general purposes, one annual sampling, or only a few samples taken at infrequent intervals during the year, is sufficient. Frequent measurement of the same constituents is not necessary unless one is concerned with a particular problem, such as monitoring for trends in nitrate concentration. In the special cases where the quality of ground water may change more rapidly, more frequent measurements are made to identify the nature of the changes.

Accuracy of the Records

In March 1989 the National Water-Quality Laboratory uncovered a bias in the turbidimetric method for sulfate analyses made from 1982 through 1989. Sulfate values below 75 mg/L as determined by the turbidimetric method have a median positive bias of 2 mg/L above the true value. In this report, sulfate values for NASQAN stations were determined using the turbidimetric method, and the data have not been corrected for this bias. Sulfate values for non-NASQAN stations in this report were determined in the Florida District QW Services unit using the chromatograph method and these data are not biased.

Data Collection and Computation

The records of ground-water quality in this report were obtained mostly as a part of special studies in specific areas. Consequently, a number of chemical analyses are presented for some counties but none are presented for others. As a result, the records for this year, by themselves, do not provide a balanced view of ground-water quality in the report area. Such a view can be attained only by considering records for this year in context with similar records obtained for these and other counties in earlier years.

Most methods for collecting and analyzing water samples are described in the "U.S. Geological Survey Techniques of Water-Resources Investigations" manuals listed at the end of the introductory text. The values reported in this report represent water-quality conditions at the time of sampling as much as possible, consistent with available sampling techniques and methods of analysis. The wells sampled were pumped long enough to assure that the water collected came directly from the aquifer and had not stood for a long time in the well casing where it would have been exposed to the atmosphere and to the material, possibly metal, comprising the casings.

Data Presentation

The records of ground-water quality are published immediately following the ground-water-level records of each county. Data for quality of ground water are identified by well number. The prime identification number for wells sampled is the 15-digit number derived from the latitude-longitude locations. The Remark Codes listed for surface-water-quality records are also applicable to ground-water-quality records.

ACCESS TO WATSTORE DATA

The National **WAT**er Data **STO**rage and **RE**trieval System (WATSTORE) was established for handling water data collected through the activities of the U.S. Geological Survey and to provide for more effective and efficient means of releasing the data to the public. The system is operated and maintained on the central computer facilities of the Survey at its National Center in Reston, Virginia.

WATSTORE can provide a variety of useful products ranging from simple data tables to complex statistical analyses. A minimal fee, plus the actual computer cost incurred in producing a desired product, is charged to the requester. Information about the availability of specific types of data, the acquisition of data or products, and user charges can be obtained locally from the offices whose addresses are given on the back of the title page.

General inquiries about WATSTORE may be directed to:

Chief Hydrologist
U.S. Geological Survey
437 National Center
Reston, VA 22092

DEFINITION OF TERMS

Terms related to streamflow, water-quality, and other hydrologic data, as used in this report, are defined below. See also table for converting English units to International System (SI) Units on the inside of the back cover.

Acre-foot (AC-FT, acre-ft) is the quantity of water required to cover 1 acre to a depth of 1 foot and is equivalent to 43,560 cubic feet or about 326,000 gallons or 1,233 cubic meters.

Algae are mostly aquatic single-celled, colonial, or multi-celled plants, containing chlorophyll and lacking roots, stems, and leaves.

Aquifer is a geologic formation, group of formations, or part of a formation that contains sufficient saturated permeable material to yield significant quantities of water to wells and springs.

Artesian means confined and is used to describe a well in which the water level stands above the top of the aquifer tapped by the well. A flowing artesian well is one in which the water level is above the land surface.

Bacteria are microscopic unicellular organisms, typically spherical, rodlike, or spiral and threadlike in shape, often clumped into colonies. Some bacteria cause disease, while others perform an essential role in nature in the recycling of materials; for example, by decomposing organic matter into a form available for reuse by plants.

Total coliform bacteria are a particular group of bacteria that are used as indicators of possible sewage pollution. They are characterized as aerobic or facultative anaerobic, gram-negative, nonspore-forming, rod-shaped bacteria which ferment lactose with gas formation within 48 hours at 35°C. In the laboratory these bacteria are defined as all the organisms that produce colonies with a golden-green metallic sheen within 24 hours when incubated at 35°C plus or minus 1.0°C on M-Endo medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

Fecal coliform bacteria are bacteria that are present in the intestine or feces of warm-blooded animals. They are often used as indicators of the sanitary quality of the water. In the laboratory they are defined as all organisms that produce blue colonies within 24 hours when incubated at 44.5°C plus or minus 0.2°C on M-FC medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

Fecal streptococcal bacteria are bacteria found also in the intestine of warm-blooded animals. Their presence in water is considered to verify fecal pollution. They are characterized as gram-positive, cocci bacteria which are capable of growth in brain-heart infusion broth. In the laboratory they are defined as all the organisms which produce red or pink colonies within 48 hours at 35°C plus or minus 1.0°C on KF-streptococcus medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

Bed material is the sediment mixture of which a streambed, lake, pond, reservoir, or estuary bottom is composed.

Biochemical oxygen demand (BOD) is a measure of the quantity of dissolved oxygen, in milligrams per liter, necessary for the decomposition of organic matter by micro-organisms, such as bacteria.

Biomass is the amount of living matter present at any given time, expressed as the mass per unit area or volume of habitat.

Ash mass is the mass or amount of residue present after the residue from the dry mass determination has been ashed in a muffle furnace at a temperature of 500°C for 1 hour. The ash mass values of zooplankton and phytoplankton are expressed in grams per cubic meter (g/m^3), and periphyton and benthic organisms in grams per square mile (g/m^2).

Dry mass refers to the mass of residue present after drying in an oven at 105°C for zooplankton and periphyton, until the mass remains unchanged. This mass represents the total organic matter, ash and sediment, in the sample. Dry-mass values are expressed in the same units as ash mass.

Organic mass or volatile mass of the living substance is the difference between the dry mass and ash mass and represents the actual mass of the living matter. The organic mass is expressed in the same units as for ash mass and dry mass.

Wet mass is the mass of living matter plus contained water.

Bottom material: See Bed material.

Cells/volume refers to the number of cells of any organism which is counted by using a microscope and grid or counting cell. Many planktonic organisms are multicelled and are counted according to the number of contained cells per sample, usually milliliters (mL) or liters (L).

Cfs-day (cubic foot per second per day) is the volume of water represented by a flow of 1 cubic foot per second for 24 hours. It is equivalent to 86,400 cubic feet, approximately 1.9835 acre-feet, about 646,000 gallons, or 2,447 cubic meters.

CFSM (cubic foot per second per square mile) is the average number of cubic feet of water flowing per second from each square mile of area drained, assuming that the runoff is distributed uniformly in time and area.

Chemical oxygen demand (COD) is a measure of the chemically oxidizable material in the water and furnishes an approximation of the amount of organic and reducing material present. The determined value may correlate with natural water color or with carbonaceous organic pollution from sewage or industrial wastes.

Chlorophyll refers to the green pigments of plants. Chlorophyll a and b are the two most common green pigments in plants.

Color unit is produced by one milligram per liter of platinum in the form of the chloro-platinate ion. Color is expressed in units of the platinum-cobalt scale.

Contents is the volume of water in a reservoir or lake. Unless otherwise indicated, volume is computed on the basis of a level pool and does not include bank storage.

Control designates a feature downstream from the gage that determines the stage-discharge relation at the gage. This feature may be a natural constriction of the channel, an artificial structure, or a uniform cross section over a long reach of the channel.

Control structure as used in this report is a structure on a stream or canal that is used to regulate the flow or stage of the stream or to prevent the intrusion of saltwater.

Cubic foot per second (ft^3/s or cfs) is the rate of discharge representing a volume of 1 cubic foot passing a given point during 1 second and is equivalent to 7.48 gallons per second or 448.8 gallons per minute or 0.02832 cubic meters per second.

Cubic foot per second per square mile (CFSM) is the average number of cubic feet of water flowing per second from each square mile of area drained, assuming that the runoff is distributed uniformly in time and area.

Discharge is the volume of water (or more broadly, volume of fluid plus suspended sediment) that passes a given point within a given period of time.

Mean discharge (MEAN) is the arithmetic mean of individual daily mean discharges during a specific period.

Instantaneous discharge is the discharge at a particular instant of time.

Dissolved refers to that material in a representative water sample which passes through a 0.45 um membrane filter. This is a convenient operational definition used by Federal agencies that collect water data. Determinations of "dissolved" constituents are made on subsamples of the filtrate.

Dissolved-solids concentration of water is determined either analytically by the "residue-on-evaporation" method, or mathematically by totaling the concentrations of individual constituents reported in a comprehensive chemical analysis. During the analytical determination of dissolved solids, the bicarbonate (generally a major dissolved component of water) is converted to carbonate. Therefore, in the mathematical calculation of dissolved-solids concentration, the bicarbonate value, in milligrams per liter, is multiplied by 0.492 to reflect the change.

Drainage area of a stream at a specified location is that area, measured in a horizontal plane, enclosed by a topographic divide from which direct surface runoff from precipitation normally drains by gravity into the stream above the specified point. Figures of drainage area given herein include all closed basins, or noncontributing areas, within the area unless otherwise specified.

Drainage basin is a part of the surface of the earth that is occupied by a drainage system, which consists of a surface stream or a body of impounded surface water together with all tributary surface streams and bodies of impounded surface water.

Gage height (G.H.) is the water-surface elevation referred to some arbitrary gage datum. Gage height is often used interchangeably with the more general term "stage," although gage height is more appropriate when used with a reading on a gage.

Gaging station is a particular site on a stream, canal, lake, or reservoir where systematic observations of hydrologic data are obtained.

Hardness of water is a physical-chemical characteristic that is commonly recognized by the increased quantity of soap required to produce lather. It is computed as the sum of equivalents of polyvalent cations and is expressed as the equivalent concentration of calcium carbonate ($CaCO_3$).

Hydrologic unit is a geographic area representing part or all of a surface drainage basin or distinct hydrologic feature as delineated by the Office of Water Data Coordination on the State Hydrologic Unit Maps; each hydrologic unit is identified by an eight-digit number.

Land-surface datum (lsd) is a datum plane that is approximately at land surface at each ground-water observation well.

Measuring point (MP) is an arbitrary permanent reference point from which the distance to the water surface in a well is measured to obtain the water level.

Micrograms per gram (μg/g) is a unit expressing the concentration of a chemical constituent as the mass (micrograms) of the element per unit mass (gram) of material analyzed.

Micrograms per liter (UG/L, μg/L) is a unit expressing the concentration of chemical constituents in solution as mass (micrograms) of solute per unit volume (liter) of water. One thousand micrograms per liter is equivalent to one milligram per liter.

Milligrams per liter (MG/L, mg/L) is a unit for expressing the concentration of chemical constituents in solution. Milligrams per liter represents the mass of solute per unit volume (liter) of water. Concentration of suspended sediment also is expressed in mg/L and is based on the mass of dry sediment per liter of water-sediment mixture.

National Geodetic Vertical Datum of 1929 (NGVD of 1929) is a geodetic datum derived from a general adjustment of the first order level nets of both the United States and Canada. It was formerly called "Sea Level Datum of 1929" or "mean sea level" in this series of reports. Although the datum was derived from the average sea level over a period of many years at 26 tide stations along the Atlantic, Gulf of Mexico, and Pacific Coasts, it does not necessarily represent local mean sea level at any particular place.

Organism is any living entity.

Organism count/area refers to the number of organisms collected and enumerated in a sample and adjusted to the number per area habitat, usually square meter (m^2), acre, or hectare. Periphyton, benthic organisms, and macrophytes are expressed in these terms.

Organism count/volume refers to the number of organisms collected and enumerated in a sample and adjusted to the number per sample volume, usually milliliter (mL) or liter (L). Numbers of planktonic organisms can be expressed in these terms.

Total organism count is the total number of organisms collected and enumerated in any particular sample.

Parameter code is a 5-digit number used in the U.S. Geological Survey computerized data system, WATSTORE, to uniquely identify a specific constituent. The codes used in WATSTORE are the same as those used in the U.S. Environmental Protection Agency data system, STORET. The Environmental Protection Agency assigns and approves all requests for new codes.

Partial-record station is a particular site where limited streamflow and/or water-quality data are collected systematically over a period of years for use in hydrologic analyses.

Particle size is the diameter, in millimeters (mm), of a particle determined by either sieve or sedimentaiton methods. Sedimentation methods (pipet, bottom-withdrawal tube, visual-accumulation tube) determine fall diameter of particles in either distilled water (chemically dispersed) or in native water (the river water at the time and point of sampling).

Partical-size classification used in this report agrees with the recommendation made by the American Geophysical Union Subcommittee on Sediment Terminology. The classification is as follows:

Classification	Size (mm)	Method of analysis
Clay..........	0.00024 - 0.004	Sedimentation
Silt...........	.004 - .062	Sedimentation
Sand..........	.062 - 2.0	Sedimentation or sieve
Gravel........	2.0 - 64.0	Sieve

The particle-size distributions given in this report are not necessarily representative of all particles in transport in the stream. Most of the organic matter is removed, and the sample is subjected to mechanical and chemical dispersion before analysis in distilled water. Chemical dispersion is not used for native-water analysis.

Percent composition is a unit for expressing the ratio of a particular part of a sample or population to the total sample or population, in terms of types, numbers, mass, or volume.

Pesticides are chemical compounds used to control undesirable organisms. Major categories of pesticides include insecticides, miticides, fungicides, herbicides, and rodenticides.

Picocurie (PC, pCi) is one millionth of the amount of radioactivity represented by a micro-curie, which is the quantity of radiation represented by one millionth of a gram of radium-226. A picocurie of radium results in 2.22 disintegrations per minute.

Recoverable from bottom material is the amount of a given constituent that is in solution after a representative sample of bottom material has been digested by a method (usually using an acid or mixture of acids) that results in dissolution of readily soluble substances. Complete dissolution of all bottom material is not achieved by the digestion treatment and thus the determination represents less than the total amount (that is, less than 95 percent) of the constituent in the sample. To achieve comparability of analytical data, equivalent digestion procedures would be required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results.

Return period is the average time interval between occurrences of a hydrological event of a given or greater magnitude, usually expressed in years. May also be called recurrence interval.

Runoff in inches (IN., in.) shows the depth to which the drainage area would be covered if all the runoff for a given time period were uniformly distributed on it.

Sediment is solid material that originates mostly from disintegrated rocks and is transported by, suspended in, or deposited from water; it includes chemical and biochemical precipitates and decomposed organic material, such as humus. The quantity, characteristics, and cause of the occurrence of sediment in streams are influenced by environmental factors. Some major factors are degree of slope, length of slope, soil characteristics, land usage, and quantity and intensity of precipitation.

Bed load is the sediment that is transported in a stream by rolling, sliding, or skipping along the bed and very close to it. In this report, bed load is considered to consist of particles in transit within 0.25 ft of the streambed.

Bed load discharge (tons per day) is the quantity of bed load measured by dry weight that moves past a section as bed load in a given time.

Suspended sediment is the sediment that at any given time is maintained in suspension by the upward components of turbulent currents or that exists in suspension as a colloid.

Suspended-sediment concentration is the velocity-weighted concentration of suspended sediment in the sampled zone (from the water surface to a point approximately 0.3 ft above the bed) expressed as milligrams of dry sediment per liter of water-sediment mixture (mg/L).

Mean concentration is the time-weighted concentration of suspended sediment passing a stream section during a 24-hour day.

Suspended-sediment discharge (tons/day) is the rate at which dry mass of sediment passes a section of a stream or is the quantity of sediment, as measured by dry mass or volume, that passes a section in a given time. It is calculated in units of tons per day as follows: concentration (mg/L) x discharge (ft^3/s) x 0.0027.

Suspended-sediment load is a general term that refers to material in suspension. It is not synonymous with either discharge or concentration.

Total-sediment discharge (tons/day) is the sum of the suspended-sediment discharge and the bed-load discharge. It is the total quantity of sediment, as measured by dry mass or volume, that passes a section during a given time.

Total-sediment load or total load is a term which refers to the total sediment (bed load plus suspended-sediment load) that is in transport. It is not synonymous with total-sediment discharge.

Sodium-adsorption-ratio (SAR) is the expression of relative activity of sodium ions in exchange reactions within soil and is an index of sodium or alkali hazard to the soil. Waters range in respect to sodium hazard from those which can be used for irrigation on almost all soils to those which are generally unsatisfactory for irrigation.

Solute is any substance that is dissolved in water.

Specific conductance is a measure of the ability of a water to conduct an electrical current. It is expressed in microsiemens per centimeter at 25°C. Specific conductance is related to the type and concentration of ions in solution and can be used for approximating the dissolved-solids content of the water. Commonly, the concentration of dissolved solids (in milligrams per liter) is about 65 percent of the specific conductance (in microsiemens). This relation is not constant from stream to stream, and it may vary in the same source with changes in the composition of the water.

Stage-discharge relation is the relation between gage height (stage) and volume of water, per unit of time, flowing in a channel.

Streamflow is the discharge that occurs in a natural channel. Although the term "discharge" can be applied to the flow of a canal, the word "streamflow" uniquely describes the discharge in a surface stream course. The term "streamflow" is more general than "runoff" as streamflow may be applied to discharge whether or not it is affected by diversion or regulation.

Surface area of a lake is that area outlined on the latest USGS topographic map as the boundary of the lake and measured by a planimeter in acres. In localities not covered by topographic maps, the areas are computed from the best maps available at the time planimetered. All areas shown are those for the stage when the planimetered map was made.

Surficial bed material is the part (0.1 to 0.2 ft) of the bed material that is sampled using U.S. Series Bed-Material Samplers.

Suspended (as used in tables of chemical analyses) refers to the amount (concentration) of undissolved material in a water-sediment mixture. It is associated with the material retained on a 0.45 µm filter.

Suspended, recoverable is the amount of a given constituent that is in solution after the part of a representative water-suspended sediment sample that is retained on a 0.45 µm membrane filter has been digested by a method (usually using a dilute acid solution) that results in dissolution of only readily soluble substances. Complete dissolution of all the particulate matter is not achieved by the digestion treatment and thus the determination represents something less than the "total" amount (that is, less than 95 percent) of the constituent present in the sample. To achieve comparability of analytical data, equivalent digestion procedures are required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results.

Determinations of "suspended, recoverable" constituents are made either by analyzing portions of the material collected on the filter or, more commonly, by difference, based on determinations of (1) dissolved and (2) total recoverable concentrations of the constituent.

Suspended, total is the total amount of a given constituent in the part of a representative water-suspended sediment sample that is retained on a 0.45 µm membrane filter. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent determined. A knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to determine when the results should be reported as "suspended, total."

Determinations of "suspended, total" constituents are made either by analyzing portions of the material collected on the filter or, more commonly, by difference, based on determinations of (1) dissolved and (2) total concentrations of the constituent.

Taxonomy is the division of biology concerned with the classification and naming of organisms. The classification of organisms is based upon a hierarchial scheme beginning with Kingdom and ending with Species at the base. The higher the classification level, the fewer features the organisms have in common. For example, the taxonomy of a particular mayfly, *Hexagenia limbata*, is the following:

Kingdom..................	Animal
Phylum...................	Arthropoda
Class....................	Insecta
Order....................	Ephemeroptera
Family...................	Ephemeridae
Genus....................	*Hexagenia*
Species..................	*Hexagenia limbata*

Thermograph is an instrument that continuously records variations of temperature on a chart. The more general term "temperature recorder" is used in the table headings and refers to any instrument that records temperature whether on a chart, a tape, or any other medium.

Time-weighted average is computed by multiplying the number of days in the sampling period by the concentrations of individual constituents for the corresponding period and dividing the sum of the products by the total number of days. A time-weighted average represents the composition of water that would be contained in a vessel or reservoir that had received equal quantities of water from the stream each day for the year.

Tons per acre-foot indicates the dry mass of dissolved solids in 1 acre-foot of water. It is computed by multiplying the concentration of the constituent, in milligrams per liter, by 0.00136.

Tons per day (T/DAY) is the quantity of a substance in solution or suspension that passes a stream section during a 24-hour period.

Total is the total amount of a given constituent in a representative water-suspended sediment sample, regardless of the constituent's physical or chemical form. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent present in both the dissolved and suspended phases of the sample. A knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to judge when the results should be reported as "total." (Note that the word "total" does double duty here, indicating both that the sample consists of a water-suspended sediment mixture and that the analytical method determined all of the constituent in the sample.)

Total discharge is the total quantity of any individual constituent, as measured by dry mass or volume, that passes through a stream cross section per unit of time. This term needs to be qualified, such as "total sediment discharge," "total chloride discharge," and so on.

Total, recoverable is the amount of a given constituent that is in solution after a representative water-suspended sediment sample has been digested by a method (usually using a dilute acid solution) that results in dissolution of only readily soluble substances. Complete dissolution of all particulate matter is not achieved by the digestion treatment, and thus the determination represents something less than the "total" amount (that is, less than 95 percent) of the constituent present in the dissolved and suspended phases of the sample. To achieve comparability of analytical data, equivalent digestion procedures are required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results.

Water year in Geological Survey reports dealing with surface-water supply is the 12-month period October 1 through September 30. The water year is designated by the calendar year in which it ends and which includes 9 of the 12 months. Thus, the year ending September 30, 1989, is called the "1989 water year."

WDR is used as an abbreviation for "Water-Data Report" in the REVISED RECORDS paragraph to refer to State annual hydrologic-data reports (WRD was used as an abbreviation for "Water-Resources Data" in reports published prior to 1976).

Weighted average is used in this report to indicate discharge-weighted average. It is computed by multiplying the discharge for a sampling period by the concentrations of individual constituents for the corresponding period and dividing the sum of the products by the sum of the discharges. A discharge-weighted average approximates the composition of water that would be found in a reservoir containing all the water passing a given location during the water year after thorough mixing in the reservoir.

WSP is used as an abbreviation for "Water-Supply Paper" in reference to previously published reports.

PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS

The U.S. Geological Survey publishes a series of manuals describing procedures for planning and conducting specialized work in water-resources investigations. The material is grouped under major subject headings called books and is further divided into sections and chapters. For example, Section A of Book 3 (Applications of Hydraulics) pertains to surface water. The chapter, the unit of publications, is limited to a narrow field of subject matter. This format permits flexibility in revision and publication as the need arises.

The reports listed below are for sale by the U.S. Geological Survey, Books and Open-File Reports Section, Federal Center, Box 25425, Denver, Colorado 80225 (authorized agent of the Superintendent of Documents, Government Printing Office). Prepayment is required. Remittance should be sent by check or money order payable to the U.S. Geological Survey. Prices are not included because they are subject to change. Current prices can be obtained by writing to the above address. When ordering or inquiring about prices for any of these publications, please give the title, book number, chapter number, and "U.S. Geological Survey Techniques of Water-Resources Investigations."

1-D1. WATER TEMPERATURE-INFLUENTIAL FACTORS, FIELD MEASUREMENT, AND DATA PRESENTATION, by H.H. Stevens, Jr., J.F. Ficke, and G.F. Smoot: USGS--TWRI Book 1, Chapter D1. 1975. 65 pages.

1-D2. GUIDELINES FOR COLLECTION AND FIELD ANALYSIS OF GROUND-WATER SAMPLES FOR SELECTED UNSTABLE CONSTITUENTS, W. W. Wood: USGS--TWRI Book 1, Chapter D2. 1976. 24 pages.

2-D1. APPLICATION OF SURFACE GEOPHYSICS TO GROUND-WATER INVESTIGATIONS, by A A.R. Zohdy, G.P. Eaton, and D. R. Mabey: USGS--TWRI Book 2, Chapter D1. 1974. 116 pages.

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3-A13. COMPUTATION OF CONTINUOUS RECORDS OF STREAMFLOW, by E.J. Kennedy: USGS--TWRI Book 3, Chapter A13, 1983. 53 pages.

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STAGE, DISCHARGE, AND WATER QUALITY OF STREAMS

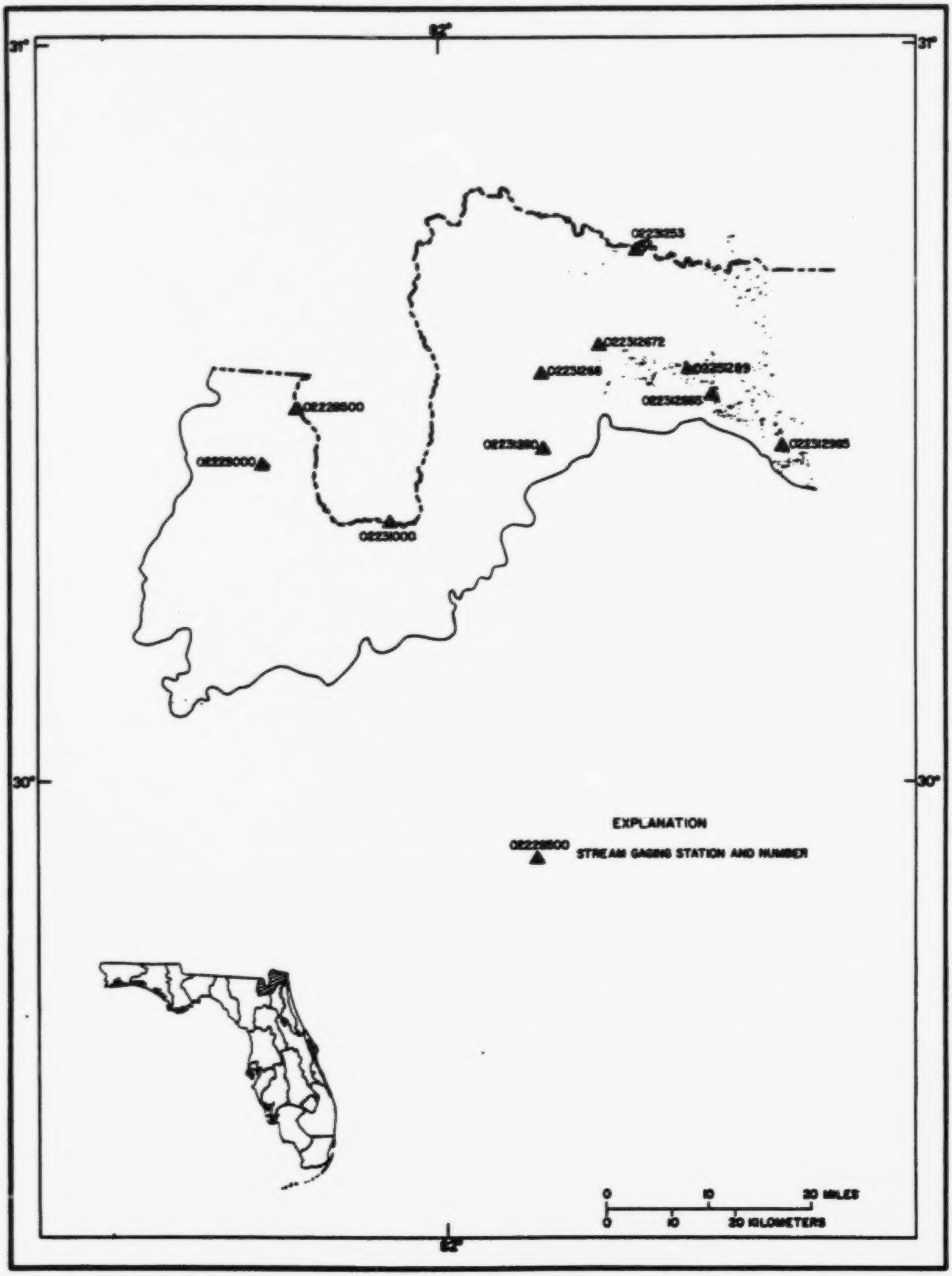

31°
82°
31°
02231253
022312672
02231268
02231289
022312885
02228500
02231280
022312985
02229000
02231000
30°
30°
EXPLANATION
02228500 STREAM GAGING STATION AND NUMBER
0 10 20 MILES
0 10 20 KILOMETERS
82°

Figure 14.--Location of stream gaging stations in the St. Marys River basin and the coastal area between the St. Marys and St. Johns Rivers.

ALTAMAHA-ST. MARYS RIVER

ST. MARYS RIVER BASIN

02228500 NORTH PRONG ST. MARYS RIVER AT MONIAC, GA

LOCATION.--Lat 30°31'03", long 82°13'50", in NW¼ sec.8, T.1 N., R.21 E., Baker County, FL, Hydrologic Unit 03070204, near right bank at upstream side of bridge on State Highway 2 and 94, 0.2 mi upstream from Georgia Southern & Florida Railway bridge, 0.4 mi west of Moniac, 1.0 mi downstream from Moccasin Creek, and 122 mi upstream from mouth of St. Marys River.

DRAINAGE AREA.--160 mi^2, approximately, includes part of watershed in Okefenokee Swamp which is indeterminate.

PERIOD OF RECORD.--January 1921 to December 1923 (published as St. Marys River at Moniac), January 1927 to June 1930, July 1932 to June 1934, October 1950 to current year.

REVISED RECORDS.--WSP 1234; Drainage area.

GAGE.--Nonrecording gage. Datum of gage is 89.40 ft above National Geodetic Vertical Datum of 1929. Prior to June 30, 1934, nonrecording gage at site 800 ft downstream at datum 3.22 ft higher. Oct. 3, 1950 to Oct. 17, 1988, water-stage recorder at present site and datum.

REMARKS.--Estimated daily discharges: Feb. 18-27, Apr. 21-24, May 29 to June 8, Aug. 4-8. Records good except for estimated daily discharges, which are fair.

AVERAGE DISCHARGE.--44 years (water years 1922-23, 1928-29, 1933, 1951-89), 156 ft^3/s, 13.24 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,600 ft^3/s, Apr. 5, 1973, gage height, 22.98 ft; no flow for many days in some years; minimum gage height, 3.62 ft, June 26, 1955.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 251 ft^3/s, Sept. 6, gage height, 8.68 ft, from graph based on gage readings; mininum daily, 0.01 ft^3/s, June 5-8; minimum gage height, 4.10 ft, June 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	1.6	18	15	8.9	7.5	26	5.5	.25	3.2	42	35
2	14	1.5	16	24	8.3	17	23	4.9	.15	3.7	40	33
3	17	1.4	15	35	8.0	37	22	4.5	.05	2.7	38	52
4	40	3.9	13	31	7.5	35	20	4.1	.03	2.0	35	75
5	39	26	12	29	7.0	32	19	3.7	.01	1.7	32	145
6	35	30	11	27	6.5	28	17	3.2	.01	2.3	30	251
7	30	22	9.8	26	6.2	25	16	3.0	.01	3.0	27	140
8	26	19	8.6	25	5.8	22	14	2.7	.01	7.5	24	133
9	22	15	8.0	23	5.5	18	13	2.5	.10	16	22	127
10	19	12	7.5	22	5.1	16	12	2.3	.30	27	19	117
11	17	11	13	21	4.9	15	11	3.0	.80	35	17	106
12	14	10	24	20	4.5	14	11	2.7	.65	29	14	97
13	12	9.5	31	19	4.3	13	10	2.6	.50	24	13	87
14	10	8.6	33	17	3.9	11	12	2.4	.45	17	17	72
15	5.1	8.3	31	17	3.5	11	14	2.2	.20	22	17	60
16	4.5	7.8	29	15	3.2	9.8	12	2.0	.10	29	17	50
17	7.5	7.0	27	15	3.0	9.8	11	1.8	.25	35	15	39
18	6.5	6.7	25	13	2.8	8.9	10	1.7	1.4	42	14	36
19	5.8	6.5	24	12	2.7	8.3	10	1.5	7.5	43	19	32
20	5.3	6.2	22	11	2.6	7.8	9.2	1.4	8.6	49	28	29
21	4.9	6.0	21	9.8	2.5	7.2	9.0	1.4	6.0	52	33	26
22	4.3	6.2	20	9.2	8.0	6.7	8.8	1.3	5.3	60	37	24
23	3.9	19	19	9.5	7.6	11	8.6	1.1	4.3	72	38	29
24	3.5	28	18	10	7.2	55	8.5	.95	4.3	69	37	46
25	3.0	24	16	12	6.6	61	8.4	.90	3.4	65	35	62
26	2.7	24	15	12	6.2	53	8.3	.80	2.7	61	34	74
27	2.6	23	14	12	5.7	44	7.8	.70	2.0	57	36	93
28	2.3	22	13	12	6.2	36	7.0	.65	1.4	56	35	107
29	2.0	20	12	11	---	31	6.5	.55	1.3	52	38	155
30	1.9	19	11	10	---	28	6.0	.45	2.0	50	35	190
31	1.7	---	12	9.5	---	32	---	.35	---	46	34	---
TOTAL	376.5	405.2	548.9	534.0	154.2	711.0	371.1	66.85	54.07	1034.1	872	2522
MEAN	12.1	13.5	17.7	17.2	5.51	22.9	12.4	2.16	1.80	33.4	28.1	84.1
MAX	40	30	33	35	8.9	61	26	5.5	8.6	72	42	251
MIN	1.7	1.4	7.5	9.2	2.5	6.7	6.0	.35	.01	1.7	13	24
CFSM	.08	.08	.11	.11	.03	.14	.08	.01	.01	.21	.18	.53
IN.	.09	.09	.13	.12	.04	.17	.09	.02	.01	.24	.20	.59

CAL YR 1988 TOTAL 33848.69 MEAN 92.5 MAX 1980 MIN .00 CFSM .58 IN. 7.87
WTR YR 1989 TOTAL 7649.92 MEAN 21.0 MAX 251 MIN .01 CFSM .13 IN. 1.78

ALTAMAHA-ST. MARYS RIVERS

ST. MARYS RIVER BASIN

02229000 MIDDLE PRONG ST. MARYS RIVER AT TAYLOR, FL

LOCATION.--Lat 30°26'10", long 82°17'15", in SW¼ sec.2, T.1 S., R.20 E., Baker County, Hydrologic Unit 03070204, near center of span on upstream side of bridge on State Highway 125, 0.5 mi southeast of Taylor, 0.9 mi upstream from Little River, and 7.4 mi upstream from mouth.

DRAINAGE AREA.--125 mi^2, approximately.

PERIOD OF RECORD.--September 1955 to September 1967, April 1976 to current year.

GAGE.--Water-stage recorder. Datum of gage is 89.51 ft above National Geodetic Vertical Datum of 1929 (Florida Department of Transportation bench mark). Prior to April 1976 at same site at datum 0.11 ft lower.

REMARKS.--Estimated daily discharges: Dec. 14 to May 23. Records fair except for periods of indefinite gage height discharge relation due to beaver dam, Dec. 14 to May 23, which are poor.

AVERAGE DISCHARGE.--25 years (water years 1956-67, 1977-89), 112 ft^3/s, 12.17 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,920 ft^3/s, Sept. 12, 1964, gage height, 14.49 ft, present datum; minimum, 0.03 ft^3/s, June 6, 1985, gage height, 0.89 ft.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 450 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Sept. 4	1700	*685	*9.44	No other peak greater than base discharge.			

Minimum discharge, 0.19 ft^3/s, June 15,16, gage height, 1.12 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	104	4.5	9.8	5.7	1.9	5.8	1.3	12	.49	5.2	45	84
2	97	4.1	8.2	5.4	1.8	6.7	1.2	19	.44	3.8	180	85
3	112	3.7	6.9	5.2	1.7	11	1.1	11	.38	2.7	176	275
4	168	4.1	5.9	7.6	1.6	16	.94	8.0	.36	2.2	119	547
5	157	7.6	5.1	6.5	1.5	20	.85	6.2	.33	1.8	85	504
6	138	11	4.6	5.7	1.4	18	.74	5.0	.35	5.0	64	325
7	121	12	4.0	5.0	1.3	14	.67	4.4	.38	27	45	234
8	108	11	3.7	4.5	1.3	12	.62	9.0	.44	43	35	185
9	98	9.1	3.6	4.2	1.2	10	.57	15	.57	59	28	150
10	89	8.3	3.5	3.9	1.2	8.8	.53	22	.98	44	23	127
11	82	7.7	6.3	3.4	1.1	7.4	1.1	32	1.0	30	20	114
12	75	7.3	18	3.2	1.1	6.4	1.9	35	.67	17	16	105
13	68	7.1	21	3.1	1.0	5.7	3.5	20	.59	11	19	98
14	61	6.3	19	2.8	.96	5.2	5.2	12	.51	7.8	89	96
15	54	5.6	18	2.6	.93	4.6	7.4	8.8	.37	7.2	74	156
16	49	5.3	16	2.5	.90	4.1	9.0	6.0	.32	27	56	228
17	43	5.1	15	2.5	.86	3.8	9.5	4.5	.41	68	39	229
18	37	4.5	14	2.3	.83	3.4	10	3.6	.95	75	29	202
19	32	4.0	13	2.2	.80	3.1	7.4	3.0	1.2	70	39	178
20	29	3.7	12	2.1	2.5	2.8	6.2	2.5	1.0	47	59	158
21	26	3.3	11	2.1	4.6	2.6	12	2.0	1.3	65	67	141
22	22	4.2	10	2.9	8.0	21	10	1.7	1.2	78	67	130
23	18	17	10	3.5	8.9	10	8.0	1.5	1.3	65	72	143
24	15	22	9.4	3.5	7.6	7.0	6.7	1.3	1.5	49	64	167
25	13	21	8.8	3.2	6.7	5.0	5.8	1.2	1.3	34	183	170
26	11	19	8.2	3.0	6.1	4.2	4.9	1.0	1.3	24	270	170
27	9.0	17	7.7	2.7	6.0	3.2	4.3	.91	1.2	17	215	171
28	7.7	16	7.2	2.5	5.7	2.6	3.7	.79	.97	12	171	187
29	6.6	13	6.8	2.4	---	2.2	3.3	.68	4.4	10	131	246
30	5.7	11	6.4	2.2	---	1.8	3.1	.64	6.0	30	104	256
31	5.1	---	6.0	2.0	---	1.5	---	.54	---	28	89	---
TOTAL	1861.1	275.5	299.1	110.4	79.48	229.9	131.52	251.26	32.21	965.7	2673	5861
MEAN	60.0	9.18	9.65	3.56	2.84	7.42	4.38	8.11	1.07	31.2	86.2	195
MAX	168	22	21	7.6	8.9	21	12	35	6.0	78	270	547
MIN	5.1	3.3	3.5	2.0	.80	1.5	.53	.54	.32	1.8	16	84
CFSM	.48	.07	.08	.03	.02	.06	.04	.06	.01	.25	.69	1.56
IN.	.55	.08	.09	.03	.02	.07	.04	.07	.01	.29	.80	1.74

CAL YR 1988 TOTAL 46080.83 MEAN 126 MAX 1280 MIN .40 CFSM 1.01 IN. 13.71
WTR YR 1989 TOTAL 12770.17 MEAN 35.0 MAX 547 MIN .32 CFSM .28 IN. 3.80

ST. MARYS RIVER BASIN

02231000 ST. MARYS RIVER NEAR MACCLENNY, FL

LOCATION.--Lat 30°21'31", long 82°04'54", in NW¼ sec.2, T.2 S., R.22 E., Baker County, Hydrologic Unit 03070204, on right bank 200 ft downstream from site of former Stokes Bridge, 1 mi downstream from confluence of North and South Prongs, 6 mi northeast of Macclenny, and 100 mi upstream from mouth.

DRAINAGE AREA.--700 mi^2, approximately, includes part of watershed in Okefenokee Swamp which is indeterminate.

PERIOD OF RECORD.--October 1926 to current year.

REVISED RECORDS.--WSP 1082: 1928(M), 1945(M). WSP 1142: 1928, 1945. WSP 1434: 1927. WSP 1905: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 40.00 ft above National Geodetic Vertical Datum of 1929 (levels by Mees and Mees). Prior to Feb. 21, 1939, nonrecording gage and Feb. 21, 1939, to Aug. 15, 1948, water-stage recorder, at site of former bridge 200 ft upstream at same datum.

REMARKS.--Records good.

AVERAGE DISCHARGE.--63 years, 670 ft^3/s, 13.00 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 28,100 ft^3/s, Sept. 25, 1947; maximum gage height, 23.25 ft, Sept. 13, 1964, from floodmark; minimum discharge observed, 12 ft^3/s, May 22, 1932; minimum gage height observed, 0.04 ft, June 4,5, 1927.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Sept. 30	1300	*1,890	*11.20	No other peak greater than base discharge.			

Minimum discharge, 21 ft^3/s, June 4,5, gage height, 0.78 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	343	74	122	85	60	57	115	48	25	219	248	261
2	314	72	115	84	62	59	106	65	24	233	283	254
3	313	70	108	85	59	80	93	81	22	182	448	335
4	466	69	102	95	56	122	83	74	22	134	436	783
5	595	79	97	93	55	124	77	62	22	105	339	1550
6	517	102	92	88	53	109	74	52	28	83	245	1800
7	437	121	89	85	52	96	70	45	29	92	183	1810
8	375	116	86	82	51	89	66	41	34	208	148	1580
9	326	105	83	79	51	81	62	38	41	250	126	1300
10	290	96	82	77	49	75	60	50	62	240	138	1010
11	262	91	85	75	47	70	60	209	89	189	149	797
12	240	86	130	74	46	66	61	281	88	149	140	644
13	219	82	192	72	45	61	64	212	67	117	120	531
14	201	80	186	71	45	57	62	156	52	92	307	461
15	187	78	169	70	44	54	68	123	42	78	488	468
16	173	75	156	68	43	52	112	99	36	72	454	610
17	162	73	145	66	42	49	139	81	35	97	327	792
18	151	71	137	64	41	47	118	68	34	151	231	913
19	141	70	129	62	41	45	93	58	33	161	268	1050
20	132	68	122	60	41	43	79	51	46	161	340	843
21	125	66	117	60	42	41	79	45	62	166	336	658
22	118	76	113	68	59	41	102	41	57	267	325	542
23	111	163	108	86	103	69	108	39	50	387	290	484
24	104	241	105	92	103	266	92	37	46	409	276	521
25	98	200	101	83	81	334	77	35	62	358	500	636
26	93	168	98	75	69	274	66	33	63	282	733	725
27	88	150	94	70	63	219	58	32	56	216	640	684
28	84	140	90	67	59	184	52	31	47	170	528	744
29	81	136	88	64	---	155	47	29	50	137	457	1490
30	78	131	87	61	---	134	46	27	114	178	375	1870
31	76	---	86	60	---	121	---	26	---	254	283	---
TOTAL	6900	3149	3514	2321	1562	3274	2389	2269	1438	5837	10161	26146
MEAN	223	105	113	74.9	55.8	106	79.6	73.2	47.9	188	328	872
MAX	595	241	192	95	103	334	139	281	114	409	733	1870
MIN	76	66	82	60	41	41	46	26	22	72	120	254
CFSM	.32	.15	.16	.11	.08	.15	.11	.10	.07	.27	.47	1.25
IN.	.37	.17	.19	.12	.08	.17	.13	.12	.08	.31	.54	1.39

CAL YR 1988 TOTAL 252745 MEAN 691 MAX 8700 MIN 21 CFSM .99 IN. 13.43
WTR YR 1989 TOTAL 68960 MEAN 189 MAX 1870 MIN 22 CFSM .27 IN. 3.66

02231000 ST. MARYS RIVER NEAR MACCLENNY, FL--Continued

GAGE HEIGHT, IN FEET ABOVE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.16	1.77	2.34	1.91	1.60	1.55	2.08	1.27	.86	3.06	3.28	3.37
2	3.98	1.74	2.25	1.91	1.62	1.58	1.99	1.51	.84	3.17	3.51	3.32
3	3.97	1.71	2.17	1.92	1.58	1.85	1.86	1.72	.81	2.75	4.51	3.82
4	4.91	1.70	2.11	2.03	1.54	2.34	1.74	1.62	.79	2.28	4.45	6.21
5	5.65	1.83	2.05	2.01	1.51	2.37	1.67	1.47	.81	1.98	3.87	9.26
6	5.23	2.11	2.00	1.95	1.48	2.20	1.63	1.32	.93	1.74	3.25	10.05
7	4.75	2.33	1.96	1.91	1.46	2.05	1.58	1.22	.95	1.84	2.76	10.08
8	4.37	2.26	1.93	1.87	1.45	1.97	1.52	1.16	1.04	2.96	2.43	9.37
9	4.06	2.14	1.90	1.84	1.45	1.87	1.47	1.10	1.16	3.29	2.21	8.38
10	3.81	2.05	1.88	1.82	1.42	1.79	1.45	1.28	1.46	3.22	2.33	7.26
11	3.62	1.98	1.91	1.79	1.39	1.73	1.44	2.93	1.81	2.81	2.44	6.33
12	3.45	1.92	2.42	1.77	1.37	1.67	1.46	3.50	1.79	2.44	2.35	5.57
13	3.29	1.88	3.05	1.76	1.36	1.61	1.49	3.00	1.53	2.11	2.14	4.98
14	3.13	1.85	2.99	1.74	1.36	1.55	1.46	2.51	1.33	1.84	3.61	4.59
15	2.99	1.82	2.83	1.73	1.34	1.51	1.55	2.17	1.17	1.68	4.74	4.63
16	2.87	1.78	2.70	1.70	1.32	1.46	2.06	1.92	1.07	1.60	4.54	5.39
17	2.75	1.75	2.59	1.67	1.31	1.42	2.34	1.72	1.06	1.89	3.80	6.30
18	2.64	1.73	2.50	1.64	1.30	1.39	2.12	1.55	1.03	2.46	3.15	6.87
19	2.53	1.71	2.41	1.62	1.30	1.36	1.85	1.42	1.01	2.56	3.40	7.45
20	2.44	1.69	2.34	1.59	1.30	1.33	1.69	1.31	1.24	2.56	3.88	6.55
21	2.36	1.66	2.28	1.59	1.31	1.29	1.69	1.22	1.47	2.61	3.86	5.64
22	2.28	1.79	2.23	1.70	1.57	1.28	1.95	1.16	1.40	3.40	3.79	5.04
23	2.20	2.74	2.18	1.93	2.12	1.62	2.02	1.12	1.29	4.16	3.57	4.72
24	2.13	3.45	2.14	2.00	2.12	3.42	1.83	1.09	1.23	4.29	3.47	4.97
25	2.06	3.11	2.10	1.90	1.87	3.85	1.66	1.05	1.47	3.99	4.77	5.64
26	2.00	2.81	2.06	1.80	1.71	3.45	1.52	1.02	1.48	3.51	6.02	6.17
27	1.95	2.63	2.02	1.73	1.63	3.07	1.41	1.00	1.38	3.04	5.55	6.02
28	1.90	2.53	1.98	1.68	1.57	2.77	1.33	.98	1.24	2.64	4.96	6.40
29	1.86	2.48	1.96	1.64	---	2.50	1.25	.94	1.28	2.32	4.56	9.70
30	1.82	2.42	1.94	1.61	---	2.29	1.23	.91	2.06	2.69	4.09	11.11
31	1.80	---	1.92	1.59	---	2.15	---	.88	---	3.32	3.52	---
MEAN	3.13	2.11	2.23	1.79	1.51	2.01	1.68	1.52	1.23	2.72	3.70	6.51
MAX	5.65	3.45	3.05	2.03	2.12	3.85	2.34	3.50	2.06	4.29	6.02	11.11
MIN	1.80	1.66	1.88	1.59	1.30	1.28	1.23	.88	.79	1.60	2.14	3.32

CAL YR 1988 MEAN 4.39 MAX 17.13 MIN .88
WTR YR 1989 MEAN 2.52 MAX 11.11 MIN .79

ST. MARYS RIVER BASIN

02231253 ST. MARYS RIVER NEAR GROSS, FL

LOCATION.--Lat 30°44'29", long 81°41'17", in land grant 41, T.4 N., R.26 E., Nassau County, Hydrologic Unit 03070204, at Florida-Georgia state line, near center of span on upstream side of bridge on U.S. Highway 17, 1.8 mi downstream from Little St. Marys River, 2.1 mi north of Gross, and 21 mi upstream from mouth.

DRAINAGE AREA.--1,360 mi^2, approximately.

PERIOD OF RECORD.--April 1966 to September 1972, October 1972 to September 1973 (gage heights only), October 1973 to August 1975, October 1980 to September 1983, October 1984 to current year (incomplete).

GAGE.--Water-stage and electromagnetic current meter recorders. Datum of gage is 10.00 ft below National Geodetic Vertical Datum of 1929. April 1966 to August 1975 water-stage and deflection meter recorder at same site and datum.

REMARKS.--Estimated daily discharges: Jan. 24 to Feb. 14, Apr. 17-19. Records poor. Discharge computed from continuous electromagnetic current meter record and represents net of much larger upstream and downstream discharges. The stage record published is the maximum and minimum tide event for each calender day.

AVERAGE DISCHARGE.--10 years (water years 1967-72, 1981-82, 1987, 1989), 1,529 ft^3/s, 1,108,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 17,300 ft^3/s, Nov. 2, 1969; maximum gage height, 14.60 ft, Nov. 1, 1969; maximum daily reverse flow, 6,230 ft^3/s, Sept. 12, 1989, caused by hurricane and extreme high tides; minimum gage height, 5.63 ft, Feb. 13, 1971.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 5,340 ft^3/s, Oct. 4; maximum gage height, 14.10 ft, Sept. 28; maximum daily reverse flow, 6,230 ft^3/s, Sept. 12, caused by hurricane and extreme high tides; minimum gage height, 7.17 ft, Apr. 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4090	3240	2670	2830	1300	2070	1430	1310	2240	2750	1890	-3560
2	3800	3260	1970	1940	1500	2200	1100	1470	2780	3500	1230	783
3	4330	1490	2060	2580	2000	2030	958	881	2960	3840	1440	483
4	5340	1810	1250	1510	2500	1680	953	2150	3170	3900	1530	555
5	3030	3220	1260	1350	3200	1330	1340	3030	3560	3380	1600	2140
6	3050	2580	2540	2340	2300	1190	1660	3120	3220	2300	885	-1780
7	3510	1620	3080	1240	3000	1560	1640	2790	3320	2420	1180	-3360
8	3890	1730	1630	1870	3500	2000	1320	2660	3450	2710	1230	-3500
9	3940	2050	1830	2310	2800	2440	1540	3130	3680	2050	1050	-4240
10	3830	2370	1940	2490	3200	2490	1760	3030	2780	1980	2090	-6120
11	3960	2580	2810	3100	2700	2780	2230	2250	2360	2170	1720	-5610
12	3410	2320	2880	3420	2400	2800	1990	2070	2440	1750	1200	-6230
13	2850	3510	4640	3390	2200	2240	2150	2090	3170	1890	1290	-3150
14	3630	3050	3440	2510	1900	2220	1850	1540	2720	1760	425	-5730
15	3370	2450	3370	3100	1720	2110	1940	1950	2610	1160	1280	-786
16	3200	2180	2320	2110	1610	1750	1370	1840	2600	2360	1640	-558
17	2810	2550	2880	1400	1220	1320	1200	1550	2830	2310	2340	-1140
18	2270	1130	2000	1960	1960	1680	1000	1890	3460	2320	2540	447
19	2310	1280	1970	1800	2240	1240	1300	2410	3710	2570	2170	1690
20	-138	3160	1680	1550	2120	1690	1620	2680	4160	2610	2630	1320
21	3260	1790	1680	338	2190	2060	2430	2970	4650	2580	2770	-709
22	2570	1680	1370	2820	2380	1520	3080	2630	4650	2720	2260	-496
23	2320	3580	2080	2900	2710	2140	3350	3140	4520	2910	1390	-2970
24	3160	2970	2770	2500	1940	2800	2320	2570	4440	2680	-793	-5060
25	2790	3570	2610	2100	2160	2410	2600	2700	4030	1840	-3330	-5890
26	3160	3250	2190	2500	2450	2110	2450	2770	2820	1520	-2010	-3690
27	2870	3150	3000	3000	2250	2020	2130	2600	2250	1350	1760	-1540
28	3240	3640	3210	3300	2340	2080	2030	972	2020	522	664	700
29	2950	2050	2130	2500	---	2040	1880	1710	2090	241	17	-2300
30	2420	2710	2460	2600	---	1880	1570	2570	1430	-55	307	-1090
31	2760	---	2180	2800	---	1970	---	2320	---	1490	-1560	---
TOTAL	97982	75970	73900	72158	63790	61850	54191	70793	94120	67528	32835	-61391
MEAN	3161	2532	2384	2328	2278	1995	1806	2284	3137	2178	1059	-2046
MAX	5340	3640	4640	3420	3500	2800	3350	3140	4650	3900	2770	2140
MIN	-138	1130	1250	338	1220	1190	953	881	1430	-55	-3330	-6230
AC-FT	194300	150700	146600	143100	126500	122700	107500	140400	186700	133900	65130	-121800

WTR YR 1989 TOTAL 703726 MEAN 1928 MAX 5340 MIN -6230 AC-FT 1396000

Note: Negative figures indicate reverse flow.

ALTAMAHA ST. MARYS RIVERS

ST. MARYS RIVER BASIN

02231253 ST. MARYS RIVER NEAR GROSS, FL--Continued

GAGE HEIGHT, IN FEET ABOVE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
TIDAL HIGH VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13.49	13.21	12.41	12.62	12.36	12.36	12.44	12.95	13.15	13.66	12.93	13.14
2	13.21	12.73	12.32	12.60	12.42	12.98	12.74	12.94	13.10	13.51	12.95	13.11
3	13.21	12.88	12.31	12.81	12.58	13.22	12.89	13.27	13.13	13.50	13.03	12.94
4	13.13	12.96	12.29	12.65	12.69	13.03	13.00	13.51	13.16	13.28	13.22	13.27
5	13.42	12.94	13.10	13.03	13.19	13.09	13.12	13.46	13.13	13.21	13.03	13.07
6	13.57	12.66	13.07	13.16	13.32	13.13	13.08	13.41	12.92	13.03	12.62	13.12
7	13.67	12.51	13.01	12.96	13.23	13.33	13.02	13.26	12.90	12.66	12.66	13.34
8	13.74	12.71	13.01	13.14	13.06	13.68	12.77	13.20	12.79	12.39	12.82	13.52
9	13.62	12.85	13.08	13.18	13.13	13.71	12.87	13.22	12.66	12.31	13.12	13.36
10	13.60	13.05	13.34	13.54	13.13	13.98	13.05	12.80	12.14	12.47	13.12	13.39
11	13.42	12.95	13.40	13.46	12.98	13.95	13.16	12.50	12.26	12.41	13.02	13.35
12	13.17	13.42	13.86	13.27	12.70	13.67	13.18	12.73	12.57	12.49	13.06	13.50
13	13.50	13.24	13.43	12.99	12.73	13.21	13.08	12.56	12.43	12.46	13.13	13.66
14	13.36	13.07	13.12	13.05	12.60	13.00	12.81	12.66	12.45	12.45	13.28	13.53
15	13.28	13.04	12.84	13.03	12.39	12.71	12.79	12.67	12.49	12.82	13.27	13.48
16	13.17	13.11	12.90	12.64	12.49	12.47	12.77	12.73	12.62	12.88	13.26	13.42
17	13.10	12.81	13.07	12.86	12.98	12.70	12.63	12.87	12.76	12.90	13.25	13.35
18	13.12	13.08	12.94	12.96	13.38	12.76	12.90	13.01	12.85	12.99	13.32	13.55
19	12.99	13.33	12.96	12.80	13.33	12.89	12.79	13.07	12.92	13.08	13.25	13.67
20	13.72	13.31	13.01	12.83	13.29	13.15	13.21	13.09	13.00	13.14	13.34	13.45
21	13.53	13.02	13.07	13.33	13.07	12.79	13.27	13.11	13.00	13.18	13.33	13.55
22	13.39	13.45	13.08	13.76	12.84	13.22	13.42	12.94	12.96	13.18	13.15	12.97
23	13.51	13.73	13.32	13.59	12.52	13.44	13.23	12.97	12.91	13.11	12.94	12.99
24	13.59	13.65	13.15	13.39	12.10	13.46	12.83	12.66	12.90	13.07	12.89	13.68
25	13.58	13.45	12.94	13.03	12.50	13.07	12.89	12.77	12.77	13.05	13.05	13.69
26	13.53	13.31	13.12	12.77	12.68	12.92	12.66	12.83	13.01	13.20	13.33	13.27
27	13.55	13.01	13.13	12.56	12.19	12.87	12.63	12.72	13.00	13.09	13.39	13.90
28	13.42	12.49	12.69	12.67	12.29	12.69	12.73	13.06	13.07	12.85	13.29	14.10
29	13.23	12.83	12.46	12.68	---	12.62	12.86	13.38	13.23	12.97	13.29	14.02
30	13.45	12.70	12.56	12.57	---	12.53	12.81	13.24	13.67	13.15	13.18	13.65
31	13.49	---	12.55	12.13	---	12.34	---	13.16	---	12.98	13.19	---
MEAN	13.41	13.05	12.95	12.97	12.79	13.06	12.92	12.99	12.86	12.95	13.12	13.43
MAX	13.74	13.73	13.86	13.76	13.38	13.98	13.42	13.51	13.67	13.66	13.39	14.10
MIN	12.99	12.49	12.29	12.13	12.10	12.34	12.44	12.50	12.14	12.31	12.62	12.94

CAL YR 1988 MEAN 13.02 MAX 13.95 MIN 11.76
WTR YR 1989 MEAN 13.05 MAX 14.10 MIN 12.10

02231253 ST. MARYS RIVER NEAR GROSS, FL--Continued

GAGE HEIGHT, IN FEET ABOVE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989 TIDAL LOW VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.79	9.96	8.29	8.19	7.71	8.93	7.37	8.20	7.68	9.56	7.43	9.25
2	9.36	9.19	8.33	8.62	7.68	9.50	7.92	7.38	7.23	8.96	8.19	9.08
3	9.51	8.94	8.28	7.91	7.34	9.32	8.10	7.82	7.20	8.45	8.80	8.83
4	9.51	9.42	7.79	7.69	7.28	8.67	7.80	8.47	7.42	8.37	9.11	9.53
5	10.18	8.85	8.68	8.00	7.74	8.20	7.57	8.27	7.36	8.57	8.64	9.61
6	10.54	8.20	8.84	8.24	8.27	8.10	7.25	7.82	7.37	8.10	8.17	9.64
7	11.19	7.48	8.26	7.52	8.28	8.02	7.17	7.84	7.80	7.84	8.54	9.90
8	11.23	7.62	7.99	7.72	8.06	9.37	7.23	8.38	7.95	7.52	8.74	10.57
9	10.83	7.80	7.85	7.93	8.15	10.17	7.61	8.03	7.33	7.77	9.52	10.13
10	10.59	8.04	8.13	8.94	8.09	10.61	8.49	7.43	7.32	8.18	9.70	9.92
11	9.94	8.10	8.62	9.40	7.75	10.02	9.06	8.14	7.72	7.97	9.24	9.53
12	9.16	9.01	9.73	8.97	7.58	8.85	9.51	8.51	8.14	7.91	8.96	9.42
13	9.15	9.21	9.44	7.68	7.65	8.90	9.05	8.37	7.89	7.72	9.04	9.80
14	9.74	8.58	8.57	8.83	7.34	8.42	9.00	8.34	7.46	7.43	8.69	9.68
15	9.40	8.51	8.18	7.59	7.65	7.84	8.84	8.47	7.43	7.94	8.54	9.22
16	9.21	8.95	8.51	7.37	7.36	7.90	8.45	8.29	7.62	7.94	8.43	9.16
17	9.05	8.38	7.86	7.40	7.43	7.87	8.68	8.29	7.51	7.44	8.46	8.63
18	9.00	8.35	8.17	8.02	9.65	8.43	8.35	8.30	7.73	7.58	8.78	8.83
19	8.76	9.17	7.98	7.50	9.44	8.23	7.99	8.38	7.84	8.03	8.82	9.76
20	9.24	9.13	7.62	7.29	9.29	9.33	8.27	8.47	8.08	8.09	9.03	9.38
21	10.06	7.74	7.62	7.48	8.91	8.23	9.35	8.29	8.01	8.74	9.06	9.49
22	9.49	8.12	7.55	9.72	8.33	8.08	9.18	8.18	8.01	8.76	8.54	8.57
23	9.24	9.56	8.09	10.25	7.25	10.34	8.06	7.92	8.10	8.80	7.94	8.36
24	9.47	8.90	8.22	9.71	7.28	9.04	8.37	7.90	8.31	8.56	7.50	9.33
25	8.73	9.15	7.96	8.89	8.25	8.50	8.11	8.09	8.03	8.15	8.09	11.05
26	8.99	8.77	8.24	8.49	7.92	8.52	7.92	8.13	8.41	8.51	8.94	9.55
27	8.97	8.35	9.01	8.12	8.10	8.37	8.29	7.97	8.11	8.22	9.12	9.81
28	9.19	7.79	8.13	8.87	7.83	8.21	8.49	8.21	7.85	7.41	8.97	11.88
29	8.73	8.20	8.14	8.59	---	8.38	8.68	9.77	7.86	7.45	8.98	11.24
30	9.51	8.90	8.91	8.14	---	7.98	8.42	8.77	8.85	7.80	8.98	10.40
31	10.34	---	8.79	7.98	---	7.37	---	8.16	---	7.81	9.09	---
MEAN	9.62	8.61	8.32	8.29	7.99	8.70	8.29	8.21	7.79	8.12	8.71	9.65
MAX	11.23	9.96	9.73	10.25	9.65	10.61	9.51	9.77	8.85	9.56	9.70	11.88
MIN	8.73	7.48	7.55	7.29	7.25	7.37	7.17	7.38	7.20	7.41	7.43	8.36

CAL YR 1988 MEAN 8.57 MAX 11.23 MIN 7.27
WTR YR 1989 MEAN 8.53 MAX 11.88 MIN 7.17

COASTAL AREA BETWEEN ST. MARYS AND ST. JOHNS RIVERS

02231268 ALLIGATOR CREEK AT CALLAHAN, FL

LOCATION.--Lat 30°33'59", long 81°50'01", in NW¼ sec. 29, T.2 N., R.25 E., Nassau County, Hydrologic Unit 03070205, on downstream side of bridge on U.S. Highway 1, 0.2 mi northwest of the intersection of U.S. Highway 1 and State Highway 200 at Callahan.

DRAINAGE AREA.--14.0 mi^2.

PERIOD OF RECORD.--October 1981 to current year.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.

REMARKS.--Records good.

AVERAGE DISCHARGE.--8 years, 12.2 ft^3/s, 11.83 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 495 ft^3/s, Sept. 2, 1985, gage height, 13.85 ft; no flow for many days in some years; minimum gage height, 6.24 ft, June 5,6,7, 1985.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 150 ft^3/s and maximum(*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Sept. 29	0045	*445	*13.47	No other peak greater than base discharge.			

Minimum discharge, 0.04 ft^3/s, June 1, gage height, 6.25 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.4	1.5	6.6	5.0	4.1	3.6	4.8	.80	.06	.90	.17	.66
2	5.0	1.5	5.2	12	3.9	5.0	3.3	3.0	.06	.68	.53	2.0
3	15	1.2	4.1	26	3.9	13	2.4	3.6	.06	.40	1.3	3.6
4	90	1.7	3.5	16	3.7	20	2.0	2.2	.10	.35	1.2	2.2
5	64	2.8	3.2	11	3.6	11	2.0	1.1	.09	.39	.65	2.5
6	29	3.0	3.0	8.9	3.4	6.8	2.0	.58	.08	.67	.35	2.7
7	17	2.8	2.9	7.5	3.2	5.3	1.6	.35	.07	.55	.20	3.4
8	11	2.2	2.9	6.6	3.1	4.5	1.5	.22	.12	.92	.16	3.8
9	8.1	1.7	2.9	6.1	3.0	4.2	1.5	.18	.29	.50	.16	7.8
10	6.3	1.5	2.9	5.5	2.8	3.9	2.2	2.6	.65	.59	.30	3.9
11	5.0	1.4	6.2	5.2	2.7	3.7	3.4	5.4	.56	.59	.90	1.9
12	4.0	1.4	21	4.9	2.5	3.4	4.2	7.8	.45	.39	.90	1.2
13	3.0	1.4	29	4.9	2.5	3.1	4.2	2.4	.26	.26	1.3	6.3
14	2.4	1.5	16	4.9	2.5	2.9	3.1	1.2	.14	.16	11	14
15	2.1	1.5	12	4.8	2.5	2.7	12	.83	.11	1.9	10	20
16	1.9	1.5	9.5	4.7	2.5	2.4	26	.49	.09	2.3	7.8	11
17	1.6	1.4	7.9	4.4	2.5	2.3	17	.31	.32	3.0	2.4	5.4
18	1.5	1.4	6.7	3.9	2.5	2.3	6.0	.19	.86	3.0	.93	4.0
19	1.4	1.4	5.9	3.8	2.8	2.2	3.1	.15	2.1	1.8	.58	3.0
20	1.1	1.4	5.4	3.6	2.9	2.0	2.7	.15	2.9	.90	.57	1.9
21	1.1	1.2	5.0	3.5	3.2	1.9	6.2	.14	2.5	.56	1.2	1.3
22	1.1	4.0	4.8	7.0	5.0	1.9	7.5	.14	3.9	1.1	1.5	1.1
23	1.1	21	4.5	14	6.5	4.0	4.2	.17	6.6	1.6	1.7	1.1
24	1.1	41	4.4	15	5.4	9.8	2.2	.17	10	1.4	2.2	2.0
25	1.6	17	4.3	9.3	4.0	19	1.3	.15	6.6	.97	11	6.9
26	1.8	9.6	4.1	7.0	3.5	8.4	.77	.13	1.6	.55	12	17
27	2.2	6.7	3.8	6.0	3.3	5.1	.48	.10	.55	.35	4.4	11
28	2.0	7.0	3.7	5.3	3.7	4.0	.39	.08	.27	.22	2.4	254
29	1.6	9.4	3.6	4.8	---	3.2	.30	.07	4.2	.19	1.2	376
30	1.4	9.3	3.7	4.6	---	2.9	.41	.07	2.4	.16	.68	234
31	1.5	---	3.7	4.4	---	4.1	---	.07	---	.14	.43	---
TOTAL	289.3	160.4	202.4	230.6	95.1	168.6	128.75	34.84	47.99	27.49	80.11	1005.66
MEAN	9.33	5.35	6.53	7.44	3.40	5.44	4.29	1.12	1.60	.89	2.58	33.5
MAX	90	41	29	26	6.5	20	26	7.8	10	3.0	12	376
MIN	1.1	1.2	2.9	3.5	2.5	1.9	.30	.07	.06	.14	.16	.66
CFSM	.39	.22	.27	.31	.14	.23	.18	.05	.07	.04	.11	1.40
IN.	.45	.25	.31	.36	.15	.26	.20	.05	.07	.04	.12	1.56

CAL YR 1988 TOTAL 5844.01 MEAN 16.0 MAX 416 MIN .02 CFSM .67 IN. 9.06
WTR YR 1989 TOTAL 2471.24 MEAN 6.77 MAX 376 MIN .06 CFSM .28 IN. 3.83

COASTAL AREA BETWEEN ST. MARYS AND ST. JOHNS RIVERS

02231280 THOMAS CREEK NEAR CRAWFORD, FL

LOCATION.--Lat 30°27'39", long 81°49'57", in NW¼ sec.32, T.1 N., R.25 E., Duval County, Hydrologic Unit 03070205, on downstream side of bridge on Acree Road, 4.4 mi southeast of Crawford, 4.4 mi northwest of Dinsmore, 7.1 mi south of Callahan, and 24 mi upstream from mouth.

DRAINAGE AREA.--29.9 mi^2.

PERIOD OF RECORD.--January 1965 to current year.

REVISED RECORDS.--WDR FL-76-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Mar. 7 to Apr. 4, Aug. 1 to Sept. 30. Records good except for estimated daily discharges, which are fair.

AVERAGE DISCHARGE.--24 years, 34.4 ft^3/s, 15.62 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,020 ft^3/s, Apr. 4, 1973, gage height, 21.04 ft, from rating curve extended above 1,600 ft^3/s; minimum, 0.41 ft^3/s, July 16, 1981, gage height, 14.50 ft.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in September 1950 reached a stage of 23.3 ft, from floodmark pointed out by local resident.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 300 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Sept. 29	----	*1050	*18.60	No other peak greater than base discharge.			

Minimum discharge, 1.5 ft^3/s, June 4,5, gage height, 14.77 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.9	4.3	13	10	6.9	7.5	6.2	5.0	1.7	8.0	2.7	15
2	11	4.2	12	19	6.7	10	5.2	12	1.6	8.1	4.0	25
3	13	4.0	11	18	6.6	25	4.6	13	1.6	4.7	6.0	40
4	46	4.9	10	14	6.4	22	3.9	7.0	1.5	3.5	8.8	70
5	42	12	9.7	12	6.3	15	4.7	4.9	1.6	3.8	7.0	140
6	24	25	9.2	10	6.0	12	4.7	3.9	1.8	3.0	4.5	100
7	17	12	8.8	10	5.8	10	4.1	3.2	2.1	5.0	3.0	70
8	13	8.0	8.7	9.6	6.0	9.0	4.7	2.8	2.1	5.0	2.2	50
9	10	6.8	8.6	9.1	5.7	8.0	4.4	2.5	2.8	3.0	3.5	35
10	9.1	6.3	8.5	8.7	5.3	7.5	4.3	2.6	4.3	2.3	6.0	25
11	8.2	5.9	11	8.6	5.2	7.0	4.6	4.2	5.9	2.0	13	17
12	7.4	5.9	39	8.7	5.2	6.5	6.0	3.8	5.3	1.7	18	13
13	6.5	6.0	43	8.9	5.1	6.2	5.3	3.0	3.2	1.5	25	16
14	6.1	6.1	28	8.6	5.1	6.0	4.5	2.7	2.3	1.6	37	24
15	5.7	5.9	20	8.3	5.0	5.8	9.6	2.5	1.9	1.6	26	35
16	5.5	5.7	17	8.1	4.9	5.6	31	2.3	1.8	1.7	15	27
17	5.2	5.8	16	7.5	4.8	5.4	16	2.1	1.9	2.5	10	22
18	4.8	5.8	14	7.1	4.9	5.2	8.9	2.0	5.8	2.8	6.5	18
19	4.7	5.8	13	6.9	5.2	5.1	6.6	2.0	18	3.1	4.8	15
20	4.5	5.7	13	6.8	5.4	5.0	5.7	2.0	22	2.9	4.5	14
21	4.5	5.6	12	7.0	5.7	4.9	8.2	2.0	14	3.6	5.0	12
22	4.6	9.6	12	13	27	4.8	8.1	2.0	19	5.6	7.0	11
23	4.2	83	11	19	30	7.0	6.0	2.0	18	4.7	10	20
24	4.0	88	11	14	14	9.6	4.6	2.0	12	8.7	12	30
25	4.2	36	11	11	10	17	3.8	1.9	8.9	8.5	18	60
26	4.1	20	10	9.7	9.0	12	3.3	1.9	5.8	5.4	33	150
27	3.8	16	9.9	8.8	8.4	9.0	3.0	1.8	4.0	3.5	17	300
28	3.7	15	9.7	8.3	7.8	7.2	2.7	1.7	2.9	2.6	11	640
29	3.7	15	9.8	7.8	---	6.6	2.5	1.7	3.1	2.0	8.0	1000
30	3.8	14	9.7	7.5	---	7.0	2.6	1.7	9.9	1.8	6.8	660
31	4.1	---	9.6	7.3	---	7.4	---	1.7	---	1.7	9.0	---
TOTAL	295.3	448.3	429.2	313.3	224.4	276.3	189.8	103.9	186.8	115.9	344.3	3654
MEAN	9.53	14.9	13.8	10.1	8.01	8.91	6.33	3.35	6.23	3.74	11.1	122
MAX	46	88	43	19	30	25	31	13	22	8.7	37	1000
MIN	3.7	4.0	8.5	6.8	4.8	4.8	2.5	1.7	1.5	1.5	2.2	11
CFSM	.32	.50	.46	.34	.27	.30	.21	.11	.21	.13	.37	4.07
IN.	.37	.56	.53	.39	.28	.34	.24	.13	.23	.14	.43	4.55

CAL YR 1988 TOTAL 11397.1 MEAN 31.1 MAX 1190 MIN 1.9 CFSM 1.04 IN. 14.18
WTR YR 1989 TOTAL 6581.5 MEAN 18.0 MAX 1000 MIN 1.5 CFSM .60 IN. 8.19

COASTAL AREA BETWEEN ST. MARYS AND ST. JOHNS RIVERS

02231289 NASSAU RIVER NEAR HEDGES, FL

LOCATION.--Lat 30°34'28" long 81°36'32", in land grant 47, T.2 N., R.27 E., Nassau County, Hydrologic Unit 03070205, near left bank at upstream side of bridge on U.S. Highway 17, 0.5 mi north of Halfmoon Island, 1.8 mi south of Hedges, and about 21 mi upstream from mouth.

DRAINAGE AREA.--274 mi^2, approximately, does not include Inconstantion Creek.

PERIOD OF RECORD.--April 1983 to current year (incomplete).

GAGE.--Water-stage recorder. Since Aug. 1, 1985, auxiliary water-stage recorder about 5.0 mi downstream from base gage. Datum of gage is 10.00 ft below National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair. Discharge represents net of much larger upstream and downstream discharges.

EXTREMES FOR PERIOD OR RECORD.--Maximum daily discharge, 11,300 ft^3/s, Sept. 2, 1985; maximum gage height, 14.50 ft, Jan. 21, 1984; maximum daily reverse flow, 3,370 ft^3/s, May 26, 1988; minimum gage height, 6.00 ft, Feb. 29, 1984.

EXTREMES FOR CURRENT PERIOD.--

Water year 1986: Maximum daily discharge, 5,070 ft^3/s, Feb. 11; maximum gage height, 13.72 ft, Jan. 11; maximum daily reverse flow, 1,580 ft^3/s, June 19; minimum gage height, 6.45 ft, Jan. 27.

Water year 1987: Maximum daily discharge, 6,380 ft^3/s, Mar. 31; maximum gage height, 13.70 ft, Jan. 5; maximum daily reverse flow, 2,430 ft^3/s, Dec. 31; minimum gage height, 6.69 ft, Jan. 31.

Water year 1988: Maximum daily discharge, 5,960 ft^3/s, Jan. 8; maximum gage height, 13.61 ft, Sept. 27; maximum daily reverse flow, 3,370 ft^3/s, May 26; minimum gage height, 6.61 ft, Feb. 12.

Water year 1989: Maximum daily discharge, 8,500 ft^3/s, Sept. 29; maximum gage height, 13.89 ft, Sept. 28; maximum daily reverse flow, 2,850 ft^3/s, Jan. 21; minimum gage height, 6.40 ft, Apr. 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	1790	911	311	269	1030	---	294	-346	393	512
2	---	---	2000	551	461	384	630	---	900	-383	1490	246
3	---	---	805	1350	77	710	-330	---	-591	-1040	964	943
4	---	---	937	979	-652	394	-494	---	-618	-1560	925	982
5	---	---	1320	1480	-303	59	-623	---	-428	683	809	1300
6	---	---	1180	1010	235	660	-254	---	330	699	1080	1010
7	---	---	32	1030	766	-256	-146	---	1300	519	614	964
8	---	---	69	-2010	571	-1460	-356	---	1040	442	554	1440
9	---	---	161	2250	1260	353	-451	---	467	448	1380	2270
10	---	---	88	1090	2290	501	157	---	-83	309	1020	2580
11	---	---	360	2540	5070	265	762	---	519	134	1020	2900
12	---	---	727	4860	3780	50	20	---	1330	419	694	2530
13	---	---	1840	4850	3390	834	347	---	491	376	798	1030
14	---	---	3430	2930	2380	2870	841	---	239	143	1840	475
15	---	---	1980	1290	2170	2620	981	---	42	-573	-218	4280
16	---	---	2590	1200	840	2880	1130	---	-609	-614	-1120	4050
17	---	---	2550	1080	1180	2920	421	---	-602	-734	-174	3010
18	---	---	2080	515	477	2640	237	---	-989	-684	198	1760
19	---	---	1390	428	-371	2420	-951	---	-1580	-755	252	2220
20	---	---	1010	206	-1100	467	168	---	-201	-590	727	1820
21	---	---	674	-614	-619	-1030	466	---	-35	487	1000	1480
22	---	---	359	-595	-252	-1470	-524	---	220	930	2370	867
23	---	---	678	-1330	-228	-116	-1150	---	1370	604	1000	669
24	---	---	514	-2420	979	-248	132	---	1360	396	807	1580
25	---	---	325	-187	401	60	927	757	751	.00	400	1990
26	---	---	51	1010	2110	882	793	635	80	80	914	1340
27	---	---	227	940	2020	1570	837	538	644	336	1300	1490
28	---	---	173	-676	-1230	1590	964	797	432	-568	1610	625
29	---	---	317	351	---	258	1130	595	-103	252	-723	147
30	---	---	423	-394	---	688	632	-260	-226	92	2110	4120
31	---	---	1020	130	---	809	---	-306	---	-367	1620	---
TOTAL	---	---	31120	24555	26013	22573	7526	---	5744	-885.00	25652	50630
MEAN	---	---	1000	792	929	728	251	---	191	-29	827	1690
MAX	---	---	3430	4860	5070	2920	1130	---	1370	930	2370	4280
MIN	---	---	32	-2420	-1230	-1470	-1150	---	-1580	-1560	-1120	147

NOTE.--Negative figures indicate reverse flow.

02231289 NASSAU RIVER NEAR HEDGES, FL--Continued

GAGE HEIGHT, IN FEET ABOVE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
TIDAL HIGH VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	12.92	12.41	12.45	12.80	12.71	12.88	12.82	12.55	12.51	13.15
2	---	---	12.65	12.66	12.38	12.65	12.63	12.52	12.82	12.49	12.48	13.29
3	---	---	12.79	12.52	12.36	12.39	12.62	12.99	13.11	12.74	12.37	13.19
4	---	---	12.86	12.38	12.50	12.09	12.69	12.93	13.22	13.08	12.50	13.14
5	---	---	12.82	12.68	12.59	12.48	12.71	12.61	13.35	12.87	12.63	13.16
6	---	---	12.50	12.73	12.73	12.62	12.62	12.76	13.26	12.82	12.66	13.08
7	---	---	12.69	12.78	12.71	12.55	12.54	13.42	13.19	12.75	12.66	13.24
8	---	---	12.84	13.52	12.90	12.79	12.66	13.28	12.94	12.74	12.61	13.18
9	---	---	12.98	13.31	13.00	12.81	12.83	12.98	12.75	12.65	12.50	13.16
10	---	---	13.10	13.33	13.10	12.69	12.85	12.75	12.76	12.52	12.41	13.05
11	---	---	13.12	13.72	12.95	12.47	12.83	12.52	12.88	12.44	12.44	12.85
12	---	---	13.00	13.30	12.69	12.55	12.70	12.77	12.71	12.48	12.57	12.63
13	---	---	12.92	12.83	12.68	12.59	12.75	12.68	12.51	12.22	12.66	12.80
14	---	---	12.45	12.75	12.67	12.69	12.84	12.62	12.43	12.19	12.47	13.19
15	---	---	13.00	12.59	12.43	12.45	12.77	12.72	12.54	12.45	12.80	13.05
16	---	---	12.89	12.64	12.50	12.40	12.48	12.54	12.59	12.60	13.00	13.10
17	---	---	12.74	12.51	12.50	12.48	12.51	12.55	12.68	12.68	12.94	13.52
18	---	---	12.47	12.28	12.40	12.37	12.53	12.60	12.86	12.77	12.87	13.53
19	---	---	12.35	12.53	12.41	12.30	12.78	12.65	13.21	12.86	12.96	13.20
20	---	---	12.41	12.16	12.60	11.78	12.94	12.78	13.24	13.07	12.93	12.98
21	---	---	12.20	12.14	12.86	12.41	12.87	13.03	13.52	13.01	12.92	12.75
22	---	---	12.43	12.45	12.78	12.91	12.91	13.19	13.50	12.99	12.69	12.71
23	---	---	12.29	12.50	12.92	12.84	13.21	13.25	13.55	12.87	12.68	12.79
24	---	---	12.23	13.17	13.08	12.71	13.29	13.26	13.27	12.91	12.74	12.62
25	---	---	12.17	13.21	13.08	12.92	13.23	13.14	13.01	12.86	12.84	12.30
26	---	---	12.14	13.09	13.05	13.00	13.17	13.14	12.99	12.69	12.71	12.18
27	---	---	12.11	12.18	12.68	13.02	13.27	13.19	13.04	12.49	12.46	12.18
28	---	---	12.25	12.25	12.62	13.04	13.20	13.11	12.77	12.45	12.18	12.45
29	---	---	12.43	12.37	---	13.20	13.07	12.95	12.65	12.42	12.88	12.79
30	---	---	12.55	12.33	---	13.08	12.93	12.90	12.63	12.41	13.02	12.74
31	---	---	12.59	12.45	---	12.90	---	12.83	---	12.61	13.02	---
MEAN	---	---	12.61	12.70	12.70	12.64	12.84	12.89	12.96	12.67	12.68	12.93
MAX	---	---	13.12	13.72	13.10	13.20	13.29	13.42	13.55	13.08	13.02	13.53
MIN	---	---	12.11	12.14	12.36	11.78	12.48	12.52	12.43	12.19	12.18	12.18

02231289 NASSAU RIVER NEAR HEDGES, FL--Continued

GAGE HEIGHT, IN FEET ABOVE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
TIDAL LOW VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	8.55	7.78	7.63	7.98	7.97	8.71	8.97	8.08	8.10	9.55
2	---	---	8.78	8.45	7.31	7.73	8.08	8.05	8.56	7.83	7.99	9.81
3	---	---	8.43	7.83	7.32	6.86	8.35	8.16	8.98	7.90	7.58	9.46
4	---	---	9.02	8.08	7.55	7.62	8.23	9.42	9.85	9.08	7.66	9.51
5	---	---	9.00	7.72	7.42	8.04	8.25	7.73	9.85	9.04	7.86	9.47
6	---	---	8.43	7.71	7.49	7.93	8.09	7.79	9.89	8.53	7.94	9.56
7	---	---	8.82	7.62	7.39	7.32	7.52	9.39	8.87	8.22	7.84	9.97
8	---	---	8.40	7.89	7.47	7.28	7.69	10.19	8.40	7.98	7.74	9.77
9	---	---	8.27	9.45	8.23	8.26	7.81	9.31	8.29	7.72	7.62	9.51
10	---	---	8.12	8.42	8.87	7.94	8.52	8.53	8.75	7.67	7.68	9.07
11	---	---	7.98	9.95	8.69	7.47	8.23	9.10	8.77	7.84	7.57	8.51
12	---	---	7.88	9.85	8.35	7.53	8.36	9.02	8.26	7.92	7.69	7.89
13	---	---	7.53	8.47	8.39	7.81	8.89	8.96	8.16	7.53	7.88	7.70
14	---	---	7.56	8.27	8.63	7.41	8.79	8.70	8.19	7.30	7.34	8.83
15	---	---	8.09	7.61	7.93	7.74	8.91	8.36	8.47	7.24	7.45	8.77
16	---	---	8.61	8.54	8.68	8.22	8.33	8.64	8.27	7.46	8.06	8.76
17	---	---	8.46	8.14	8.66	8.24	8.60	8.60	7.92	7.37	8.00	9.34
18	---	---	7.99	8.21	8.34	8.66	9.02	8.50	7.78	7.11	7.64	10.09
19	---	---	8.09	7.67	8.41	7.58	9.45	8.30	8.64	7.21	8.13	9.51
20	---	---	7.76	7.38	8.34	8.01	9.51	8.12	8.34	7.68	8.30	9.09
21	---	---	7.76	7.26	8.85	8.50	8.70	8.10	8.50	7.67	8.10	8.57
22	---	---	7.71	7.87	8.46	9.16	8.50	8.34	9.48	8.74	8.11	8.39
23	---	---	7.81	7.77	8.14	8.94	8.86	8.26	8.83	8.14	8.29	8.67
24	---	---	7.26	8.83	9.02	8.20	8.62	7.98	8.32	8.54	8.62	8.72
25	---	---	7.18	9.64	8.66	8.09	8.35	8.00	8.35	8.72	8.71	8.16
26	---	---	6.69	8.75	9.02	8.48	8.16	8.54	9.06	8.29	8.99	8.03
27	---	---	6.79	6.45	7.18	8.29	8.57	8.88	9.18	7.91	8.41	8.03
28	---	---	6.87	6.55	8.00	8.53	8.71	8.95	8.65	7.85	7.90	8.16
29	---	---	7.26	7.22	---	8.70	8.54	8.84	8.21	7.81	8.39	8.82
30	---	---	7.33	6.84	---	8.31	8.63	9.03	7.97	7.83	9.89	8.63
31	---	---	7.76	7.82	---	8.03	---	9.01	---	8.19	9.49	---
MEAN	---	---	7.94	8.07	8.16	8.03	8.47	8.63	8.66	7.95	8.10	8.94
MAX	---	---	9.02	9.95	9.02	9.16	9.51	10.19	9.89	9.08	9.89	10.09
MIN	---	---	6.69	6.45	7.18	6.86	7.52	7.73	7.78	7.11	7.34	7.70

ALTAMAHA-ST. MARYS RIVERS

COASTAL AREA BETWEEN ST. MARYS AND ST. JOHNS RIVERS

02231289 NASSAU RIVER NEAR HEDGES, FL--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4280	721	270	1440	485	2280	3680	678	806	1010	1550	332
2	4180	393	1550	2000	1420	1420	4180	574	772	882	1050	341
3	4000	-157	2020	1750	308	1620	4350	891	552	963	800	-171
4	3980	525	903	62	376	998	2790	742	311	351	829	-385
5	2690	1360	323	-276	-178	775	1780	491	-377	1.0	602	503
6	2380	1600	665	2970	1110	188	1290	909	-1170	-388	362	1540
7	2050	1010	1560	3420	589	1130	1380	503	137	-683	-372	1440
8	2630	759	1920	1160	3170	3270	874	103	-17	-434	-184	1960
9	2880	512	2870	-51	1510	1800	521	-1300	-36	-100	681	1820
10	1460	-379	666	741	-300	-1510	497	443	5.0	330	1240	1420
11	1990	-786	520	252	576	-827	-255	-161	-391	701	853	1420
12	4740	509	1140	-194	122	-303	47	14	828	838	499	1340
13	3270	-1440	-1060	-1210	-881	-367	-396	849	1330	821	887	1220
14	901	-1480	164	-475	-129	-371	-448	942	1210	1170	1480	737
15	-423	1270	919	-551	-93	1020	419	1040	926	1070	1690	82
16	463	1040	1050	-1030	-355	1010	479	1160	594	470	1370	-148
17	553	482	652	-1050	1010	-843	762	903	439	-156	623	71
18	101	326	492	502	1100	855	543	1180	-84	-321	364	45
19	392	-132	365	2060	1730	1290	707	919	-429	488	122	-340
20	1170	1050	975	-165	625	1230	902	109	-87	1490	104	-912
21	1170	926	153	61	867	2570	609	-924	93	1280	-36	-609
22	864	563	393	2710	2980	978	-168	-784	-106	761	733	187
23	945	793	2600	1850	3550	758	-496	331	-288	264	1140	306
24	903	1120	3100	469	272	680	-171	131	8.0	1140	586	923
25	625	924	1650	140	-699	1520	-609	89	-137	1390	856	1080
26	811	225	192	-565	-847	1990	-577	188	540	1860	1310	942
27	43	39	-1400	-1390	-211	2260	-251	13	745	1860	1300	884
28	78	-1450	-838	-216	678	2970	854	536	118	1380	1340	828
29	-409	-728	-451	-717	---	2770	667	1010	601	1070	1140	1120
30	-1140	604	1380	1260	---	4650	1640	926	942	972	797	726
31	-581	---	-2430	34	---	6380	---	1110	---	1690	956	---
TOTAL	46996	10199	22313	14991	18785	42191	25600	13615	7835.0	22170.0	24672	18702
MEAN	1520	340	720	484	671	1360	853	439	261	715	796	623
MAX	4740	1600	3100	3420	3550	6380	4350	1180	1330	1860	1690	1960
MIN	-1140	-1480	-2430	-1390	-881	-1510	-609	-1300	-1170	-683	-372	-912

WTR YR 1987   TOTAL 268069.0   MEAN 734   MAX 6380   MIN -2430

NOTE.--Negative figures indicate reverse flow.

ALTAMAHA-ST. MARYS RIVERS

COASTAL AREA BETWEEN ST. MARYS AND ST. JOHNS RIVERS

02231280 NASSAU RIVER NEAR HEDGES, FL--Continued

GAGE HEIGHT, IN FEET ABOVE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
TIDAL HIGH VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12.73	13.20	13.68	13.48	12.83	13.16	12.74	12.64	12.64	12.41	12.43	12.79
2	12.69	13.15	13.51	13.09	12.77	12.81	12.79	12.61	12.49	12.31	12.39	12.79
3	12.68	13.34	13.07	13.00	12.49	12.80	12.67	12.58	12.31	12.02	12.51	12.90
4	12.70	13.54	12.96	13.24	12.56	12.82	11.94	12.47	12.28	12.20	12.48	13.20
5	12.75	13.37	13.10	13.70	12.92	12.79	11.62	12.70	12.45	12.29	12.57	13.29
6	12.88	13.06	13.18	13.57	13.28	12.82	11.81	12.93	12.82	12.44	12.70	13.23
7	13.16	12.92	12.92	13.01	13.10	12.97	11.96	12.64	12.78	12.75	12.86	13.21
8	13.08	12.87	12.64	12.55	13.08	12.80	12.06	12.47	12.76	12.85	13.05	13.23
9	12.88	12.68	12.52	12.76	11.94	12.28	11.96	12.90	12.75	12.92	13.07	12.99
10	12.86	12.69	12.47	12.75	12.60	12.48	12.34	12.80	12.76	13.00	13.06	12.85
11	13.21	12.83	12.64	11.96	12.51	12.96	12.43	12.91	13.13	13.07	12.92	12.83
12	13.13	12.77	12.62	12.06	12.35	12.94	12.34	13.06	13.12	13.09	13.04	12.80
13	13.04	12.86	12.77	12.42	12.52	12.87	12.50	13.06	13.03	13.14	13.17	12.57
14	12.87	13.47	13.23	12.73	12.72	12.98	12.81	13.06	12.83	13.07	13.13	12.55
15	12.88	13.12	13.10	12.64	12.71	12.98	12.80	13.08	12.76	12.85	12.85	12.59
16	12.95	12.92	13.01	12.71	13.13	12.84	12.82	13.07	12.67	12.76	12.62	12.59
17	13.06	12.77	12.94	12.91	13.11	13.25	12.93	12.96	12.56	12.90	12.52	12.50
18	13.08	12.83	12.96	13.09	12.89	13.29	12.85	12.94	12.52	13.02	12.47	12.41
19	13.26	12.84	12.88	12.72	12.78	13.21	12.92	12.70	12.67	12.87	12.54	12.46
20	13.11	13.03	12.96	12.32	12.82	13.18	12.88	12.53	12.59	12.74	12.69	12.69
21	12.96	12.81	13.10	12.54	13.00	13.16	12.75	12.77	12.51	12.66	12.81	12.84
22	12.89	12.76	13.26	12.92	13.18	12.91	12.75	12.94	12.54	12.69	12.78	12.82
23	12.71	12.76	13.19	12.22	12.65	13.17	12.84	12.88	12.59	12.93	12.59	12.85
24	12.55	12.53	12.92	12.37	12.78	13.22	12.80	12.84	12.58	12.93	12.77	12.98
25	12.48	12.45	12.55	12.67	13.02	13.20	12.94	12.84	12.74	12.89	12.76	12.89
26	12.54	12.45	12.57	12.57	13.30	13.11	13.09	12.88	12.66	12.86	12.76	12.87
27	12.61	12.45	12.86	12.84	13.36	13.12	13.24	13.06	12.64	12.69	12.64	12.87
28	12.54	12.80	13.31	12.86	13.33	13.04	13.17	13.08	12.58	12.48	12.48	12.90
29	12.71	13.24	13.37	13.09	---	13.13	13.14	13.09	12.74	12.39	12.33	12.82
30	12.98	13.42	13.26	12.83	---	13.00	13.11	12.96	12.64	12.47	12.50	12.66
31	13.27	---	13.41	12.58	---	12.98	---	12.81	---	12.44	12.62	---
MEAN	12.88	12.93	13.00	12.78	12.85	12.98	12.63	12.85	12.67	12.71	12.71	12.83
MAX	13.27	13.54	13.68	13.70	13.36	13.29	13.24	13.09	13.13	13.14	13.17	13.29
MIN	12.48	12.45	12.47	11.96	11.94	12.28	11.62	12.47	12.28	12.02	12.33	12.41

CAL YR 1986 MEAN 12.82 MAX 13.72 MIN 11.78
WTR YR 1987 MEAN 12.82 MAX 13.70 MIN 11.62

02231289 NASSAU RIVER NEAR HEDGES, FL--Continued

GAGE HEIGHT, IN FEET ABOVE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
TIDAL LOW VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.40	9.60	9.67	9.85	8.00	8.58	7.85	8.02	8.39	8.13	8.04	8.24
2	8.18	9.01	9.59	8.64	7.79	8.25	8.25	8.43	8.23	7.95	7.71	8.15
3	8.22	8.88	8.56	8.21	8.04	8.49	7.56	8.33	7.99	7.60	7.79	8.38
4	8.09	9.71	7.91	9.09	8.55	8.55	6.87	8.29	8.17	7.51	7.34	8.65
5	7.91	9.56	8.34	11.66	10.16	9.08	7.39	9.32	8.60	7.37	7.09	9.17
6	7.77	8.80	9.84	10.29	10.06	9.53	8.24	9.32	9.07	7.36	7.14	8.96
7	8.93	8.43	9.20	8.64	10.03	10.20	7.97	9.04	8.94	7.53	7.19	9.13
8	8.91	8.68	8.52	8.66	9.19	8.34	7.77	8.54	8.20	7.58	7.51	8.85
9	8.65	8.59	8.16	8.61	8.09	7.78	7.62	8.79	7.53	7.49	8.06	8.58
10	8.35	8.43	8.13	8.58	8.19	7.78	7.74	8.64	7.09	7.58	7.97	8.23
11	9.09	9.14	8.10	7.58	8.09	9.65	7.88	8.22	7.62	7.73	8.52	8.27
12	9.91	8.90	8.03	7.11	7.70	9.38	7.18	8.30	7.92	7.93	8.87	8.17
13	9.32	8.47	7.55	7.00	7.34	9.06	7.01	8.25	7.36	8.44	9.52	7.91
14	8.75	10.13	9.74	8.03	8.23	9.13	7.43	8.14	7.39	8.32	9.75	7.99
15	8.85	9.76	9.38	7.90	8.17	9.22	7.70	8.20	7.45	8.32	9.06	8.25
16	9.04	9.12	9.13	8.10	9.19	8.51	7.91	8.07	7.71	8.18	8.30	8.54
17	9.43	8.42	8.90	8.50	9.30	8.98	7.87	8.28	7.61	8.61	7.99	8.33
18	9.29	8.36	8.95	9.62	8.87	9.53	8.38	8.08	7.67	9.37	8.06	7.92
19	10.20	8.57	8.61	7.84	8.80	9.12	8.55	7.87	7.91	8.96	8.10	7.75
20	9.75	9.74	9.12	7.95	9.25	9.48	8.55	7.77	7.78	8.55	8.18	8.18
21	9.31	8.97	9.44	8.50	9.60	8.61	8.46	8.15	7.47	8.24	8.52	8.78
22	9.31	9.13	10.68	7.79	9.20	9.22	8.68	9.10	7.46	8.15	8.53	8.87
23	9.10	9.40	10.48	7.17	8.21	9.44	8.60	8.74	7.65	8.43	7.99	8.81
24	8.85	8.78	8.80	7.65	7.84	9.85	8.35	8.18	7.50	8.78	7.98	9.03
25	8.94	8.64	8.23	7.58	8.28	9.58	8.54	8.00	8.09	8.77	8.72	8.92
26	9.03	8.51	8.35	7.47	9.14	9.19	8.92	8.14	8.14	8.42	8.54	8.71
27	9.18	8.32	8.29	7.61	9.57	9.19	9.16	8.85	7.63	7.92	8.28	8.54
28	8.78	8.13	9.30	7.85	9.72	9.10	8.47	9.13	8.31	7.70	8.01	8.70
29	8.71	9.35	9.10	7.87	---	8.96	9.05	8.94	8.45	7.82	7.59	8.62
30	8.96	9.47	8.94	7.89	---	8.92	8.03	8.76	8.23	8.36	7.61	8.10
31	9.76	---	8.14	6.69	---	7.04	---	8.46	---	8.16	8.09	---
MEAN	8.93	8.97	8.88	8.26	8.74	8.96	8.07	8.46	7.92	8.11	8.13	8.49
MAX	10.20	10.13	10.68	11.66	10.16	10.20	9.16	9.32	9.07	9.37	9.75	9.17
MIN	7.77	8.13	7.55	6.69	7.34	7.04	6.87	7.77	7.09	7.36	7.09	7.75

CAL YR 1986 MEAN 8.48 MAX 10.68 MIN 6.45
WTR YR 1987 MEAN 8.49 MAX 11.66 MIN 6.69

COASTAL AREA BETWEEN ST. MARYS AND ST. JOHNS RIVERS

02231289 NASSAU RIVER NEAR HEDGES, FL--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	-731	-900	115	1950	71	-371	185	499	483	350	962	1110
2	494	-1180	-160	315	186	178	430	418	828	748	881	1510
3	137	294	-106	876	243	579	442	917	417	937	333	1680
4	-724	1160	391	3240	336	1220	754	645	-803	660	233	1510
5	121	1330	-1360	3940	-138	745	657	442	667	-43	48	1960
6	810	-11	74	4490	742	315	1040	63	1000	-477	338	861
7	1350	1440	114	3890	498	1520	345	101	373	170	3.0	-671
8	665	1500	804	5960	984	1440	175	317	-276	588	-267	4450
9	515	1060	2020	5340	875	1660	1070	242	393	201	-122	5150
10	672	1560	1330	4720	520	1700	652	-361	-635	-22	389	3670
11	812	468	1000	4590	1120	11	516	-401	-1110	616	601	2690
12	555	88	1060	5190	1770	1420	1010	-422	48	888	560	2760
13	-381	332	375	5060	-170	865	-767	-394	542	827	702	2960
14	247	-142	1010	3720	-389	-125	-642	-229	815	719	1710	2240
15	-6.0	-138	1350	3960	98	-590	370	10	636	731	1620	1630
16	369	-311	547	4350	52	-874	185	717	562	775	1250	996
17	736	870	-266	4860	-406	-591	1290	657	698	804	883	2260
18	1300	48	-172	5330	-147	224	1590	622	851	906	990	1760
19	642	-363	436	332	1900	1160	2010	932	506	925	1170	657
20	701	787	551	1800	4080	1080	666	813	366	863	623	190
21	1140	-632	293	1980	5370	864	1690	681	298	888	108	305
22	-262	-10	407	2160	5480	29	1520	598	146	733	-718	-815
23	1190	916	2580	1820	5170	919	1390	842	-122	483	-1080	-92
24	1090	1100	2540	1650	4400	1090	1470	298	-182	182	-62	781
25	1270	1290	2810	1860	2640	979	355	-162	-1300	-561	-76	945
26	614	1130	2170	2170	1290	765	-60	-3370	-476	-524	341	559
27	1730	936	1690	625	1130	174	759	-553	121	-115	1110	247
28	1440	-358	1390	443	-1040	-284	855	227	-199	341	1540	872
29	752	503	1100	206	445	53	95	-170	1260	646	1490	543
30	370	165	805	240	---	26	-281	-586	1350	798	1250	1490
31	-501	---	1890	165	---	32	---	202	---	892	790	---
TOTAL	17117.0	12932	26788	87232	37110	16213	19771	3595	7257	14929	17600.0	44208
MEAN	552	431	864	2810	1280	523	659	116	242	482	568	1470
MAX	1730	1560	2810	5960	5480	1700	2010	932	1350	937	1710	5150
MIN	-731	-1180	-1360	165	-1040	-874	-767	-3370	-1300	-561	-1080	-815

CAL YR 1987 TOTAL 245398.0 MEAN 672 MAX 6380 MIN -1510
WTR YR 1988 TOTAL 304752.0 MEAN 833 MAX 5960 MIN -3370

NOTE.--Negative figures indicate reverse flow.

02231289 NASSAU RIVER NEAR HEDGES, FL--Continued

GAGE HEIGHT, IN FEET ABOVE DATUM, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
TIDAL HIGH VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12.94	12.95	12.76	12.71	12.48	12.67	12.57	13.31	13.03	12.97	12.87	13.01
2	12.78	13.17	12.64	12.67	12.46	12.83	12.59	13.16	13.00	13.24	12.78	12.94
3	12.68	13.32	12.65	13.22	12.46	12.67	12.69	13.10	12.92	13.12	12.89	12.83
4	12.90	13.29	12.20	12.86	12.49	12.52	12.67	12.98	13.09	13.01	12.89	12.62
5	12.94	13.27	12.70	12.70	12.71	12.51	12.67	12.87	13.34	13.02	12.83	12.29
6	12.96	13.56	12.70	12.69	12.58	12.77	12.70	12.82	12.98	13.08	12.69	12.70
7	12.78	13.21	12.84	12.98	12.78	12.83	12.48	12.89	12.70	12.98	12.65	13.54
8	12.79	12.93	12.86	12.70	12.70	12.67	12.64	12.89	12.73	12.75	12.69	13.30
9	12.89	12.85	12.66	12.47	12.63	12.61	12.76	12.94	12.53	12.64	12.77	13.05
10	13.05	12.54	12.48	12.46	12.61	12.51	12.90	12.83	12.83	12.59	12.69	12.95
11	13.04	12.11	12.26	12.62	12.82	12.43	13.07	12.91	13.08	12.69	12.70	13.01
12	12.92	12.61	11.77	12.59	12.65	12.75	12.98	12.77	13.06	12.55	12.72	13.02
13	13.33	12.66	12.15	12.47	11.61	12.50	13.06	12.88	12.99	12.50	12.81	13.02
14	13.17	12.71	12.20	12.44	12.53	12.53	13.31	12.92	12.88	12.48	12.97	12.84
15	13.22	12.68	12.28	12.92	12.84	12.49	13.29	12.99	12.86	12.49	12.57	12.85
16	13.21	12.75	11.82	13.00	12.40	12.70	13.40	12.94	12.85	12.39	12.33	13.09
17	13.17	12.81	12.26	12.99	12.76	12.85	13.27	12.88	12.82	12.35	12.36	12.92
18	12.99	12.76	12.65	12.86	12.99	13.02	13.25	12.89	12.70	12.31	12.33	12.78
19	12.97	12.93	12.83	13.01	13.09	12.87	13.05	12.82	12.56	12.16	12.26	12.88
20	13.00	13.03	12.81	12.95	13.03	12.73	12.73	12.64	12.54	12.12	12.31	12.95
21	12.93	12.97	12.78	12.97	13.06	12.49	12.93	12.55	12.51	12.09	12.47	12.96
22	13.35	13.08	12.97	12.70	12.89	12.43	12.58	12.51	12.50	12.10	12.71	13.23
23	13.20	13.13	13.00	12.60	12.86	12.83	12.49	12.30	12.52	12.04	13.00	13.26
24	13.27	13.02	12.97	12.54	12.69	12.52	12.44	12.03	12.56	12.34	12.98	13.13
25	13.19	12.96	12.75	12.69	12.48	12.27	12.35	12.07	12.90	12.63	12.99	13.17
26	13.36	12.91	12.44	12.15	12.41	12.06	12.87	13.07	12.93	12.82	12.97	13.22
27	13.18	12.83	12.29	11.92	12.50	11.74	12.80	12.96	13.12	12.91	13.08	13.61
28	12.98	12.98	12.53	12.30	12.63	12.08	12.55	12.84	13.26	12.96	13.11	13.39
29	12.93	12.88	12.17	12.22	12.79	12.38	12.70	12.81	13.09	12.97	12.89	13.47
30	12.78	12.84	12.79	12.32	---	12.34	13.06	13.00	13.09	13.01	12.86	13.28
31	12.84	---	12.77	12.40	---	12.46	---	13.02	---	12.99	12.98	---
MEAN	13.02	12.92	12.55	12.65	12.65	12.55	12.83	12.83	12.87	12.65	12.75	13.04
MAX	13.36	13.56	13.00	13.22	13.09	13.02	13.40	13.31	13.34	13.24	13.11	13.61
MIN	12.68	12.11	11.77	11.92	11.61	11.74	12.35	12.03	12.50	12.04	12.26	12.29

CAL YR 1987 MEAN 12.79 MAX 13.70 MIN 11.62
WTR YR 1988 MEAN 12.78 MAX 13.61 MIN 11.61

ALTAMAHA-ST. MARYS RIVERS

COASTAL AREA BETWEEN ST. MARYS AND ST. JOHNS RIVERS

02231289 NASSAU RIVER NEAR HEDGES, FL--Continued

GAGE HEIGHT, IN FEET ABOVE DATUM, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
TIDAL LOW VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.58	8.98	8.25	7.92	7.53	8.45	7.94	9.39	8.19	8.49	8.15	8.68
2	8.29	9.37	7.75	7.73	7.60	8.80	7.90	9.05	7.87	8.63	7.96	8.70
3	7.80	9.99	7.54	9.40	7.53	8.35	7.84	8.29	8.18	8.68	8.07	8.43
4	8.58	9.63	6.92	8.79	7.64	7.87	7.65	7.95	10.09	8.99	8.36	8.23
5	8.56	9.48	7.42	7.93	7.76	7.46	7.78	7.51	9.12	9.28	8.22	7.91
6	8.72	8.89	7.80	8.10	8.56	8.29	7.72	7.87	8.51	9.81	8.00	7.89
7	8.09	9.69	8.11	9.18	9.04	8.29	7.50	8.46	8.25	9.24	7.78	9.29
8	7.66	8.82	8.63	8.75	8.63	8.06	8.68	8.60	7.97	8.23	7.94	10.27
9	8.17	8.63	8.52	8.52	8.84	7.87	9.03	8.69	7.49	7.65	8.31	9.54
10	8.79	8.50	8.31	8.66	9.19	7.02	9.03	8.43	7.13	7.40	8.07	9.16
11	9.10	7.94	7.93	9.10	8.94	8.64	9.41	8.21	8.69	7.55	7.89	9.32
12	8.96	8.97	7.81	8.54	6.61	7.99	8.69	8.49	8.36	7.24	8.37	9.50
13	10.56	9.02	8.17	7.74	6.66	7.49	8.25	7.71	8.31	7.40	8.57	9.25
14	10.85	9.33	8.34	8.06	7.10	7.18	8.96	7.70	8.05	7.47	8.39	8.90
15	10.91	9.43	7.48	8.98	7.48	7.00	8.83	7.93	8.08	7.60	8.14	8.84
16	10.56	9.41	7.41	8.79	6.72	7.19	8.93	7.78	8.34	7.70	7.90	9.35
17	10.61	9.28	6.84	8.24	6.99	7.61	8.57	7.91	8.36	7.66	7.99	9.48
18	9.91	8.95	7.53	7.54	7.49	8.09	8.03	8.11	8.27	7.72	8.01	8.59
19	9.80	8.40	7.91	7.66	8.79	7.23	7.22	8.13	8.45	7.84	7.71	8.77
20	9.64	8.76	7.56	7.85	9.07	6.95	8.44	8.06	8.63	7.86	7.69	8.76
21	9.25	7.89	7.27	7.70	8.64	6.86	8.17	8.22	8.65	7.71	7.63	8.41
22	9.02	8.28	7.53	7.83	8.66	7.42	8.18	8.28	8.60	7.43	7.92	8.73
23	9.52	8.63	7.93	7.70	8.47	8.01	8.34	8.07	8.34	7.41	8.70	9.19
24	9.56	8.31	8.27	7.76	8.03	7.73	7.99	7.72	8.22	7.20	8.23	8.85
25	9.27	8.41	8.11	7.88	8.15	7.81	8.20	7.33	8.64	7.53	8.05	8.54
26	9.43	8.46	7.62	6.70	8.53	7.53	9.12	8.11	8.73	7.70	7.82	8.99
27	9.61	8.52	7.65	7.32	8.31	7.65	9.02	9.57	8.37	7.63	7.97	9.97
28	8.70	9.12	7.85	7.54	7.62	7.64	8.18	8.50	9.30	7.60	8.59	9.60
29	8.84	9.33	7.34	7.29	9.08	8.15	8.02	7.84	8.41	7.69	8.15	9.78
30	8.53	8.96	7.56	7.42	---	8.02	7.91	8.17	7.68	7.98	7.96	9.79
31	8.55	---	8.25	7.48	---	7.84	---	8.22	---	8.11	8.30	---
MEAN	9.17	8.91	7.79	8.07	8.06	7.76	8.32	8.20	8.38	7.95	8.09	9.02
MAX	10.91	9.99	8.63	9.40	9.19	8.80	9.41	9.57	10.09	9.81	8.70	10.27
MIN	7.66	7.89	6.84	6.70	6.61	6.86	7.22	7.33	7.13	7.20	7.63	7.89

CAL YR 1987 MEAN 8.42 MAX 11.66 MIN 6.69
WTR YR 1988 MEAN 8.31 MAX 10.91 MIN 6.61

ALTAMAHA-ST. MARYS RIVERS

COASTAL AREA BETWEEN ST. MARYS AND ST. JOHNS RIVERS

02231289 NASSAU RIVER NEAR HEDGES, FL--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1460	331	779	1880	428	68	-465	-266	-227	699	1290	2170
2	887	1100	472	931	337	134	-215	-289	122	1930	1140	1930
3	1110	-410	527	1770	-58	234	-1130	-1140	236	2220	584	1790
4	898	-231	-50	767	-505	511	-87	-614	628	1720	1150	997
5	-582	1300	-761	641	-1020	52	-5.0	672	1150	1990	1480	2130
6	-468	718	658	1680	-164	-107	737	973	727	2430	836	1420
7	-419	31	626	917	575	-687	734	776	1470	1480	1070	1400
8	85	3.0	1330	-247	-203	-955	673	540	1330	860	440	1090
9	638	128	1020	264	529	-209	633	1360	1760	559	-93	2260
10	980	128	257	-80	1150	-457	486	1460	1380	488	80	1440
11	1710	572	90	625	1180	911	439	293	750	283	595	1420
12	1470	-343	-1260	1170	964	1920	290	291	506	-54	340	434
13	18	1210	1480	1670	996	1410	552	39	1080	250	271	463
14	973	1040	1410	6.0	1010	1250	-128	-609	935	-10	169	1580
15	876	552	1070	1310	406	1030	286	-409	1070	-601	787	1860
16	932	445	-249	406	117	325	-490	-386	868	56	1060	2260
17	882	670	250	-255	-2620	-499	-199	-580	809	351	1150	2180
18	390	-820	-70	246	-1070	261	-386	-60	957	471	1160	1320
19	258	-747	632	393	-47	-863	-66	180	1060	730	1040	1130
20	-2580	1050	928	50	226	-531	-1100	319	1490	891	1150	1860
21	442	-16	1220	-2850	1520	659	-167	877	1630	1050	1450	392
22	198	-1000	843	-1830	1550	-1330	703	572	1500	1540	1540	2510
23	-271	822	978	140	1660	-300	1300	1140	1390	1480	1180	899
24	603	466	1830	1050	145	2140	463	572	1130	1260	618	-2240
25	393	1550	1660	816	540	905	960	567	860	644	12	684
26	827	1480	915	526	1350	676	899	687	287	-218	-600	3350
27	740	1700	1610	725	1280	1780	538	634	505	347	395	-676
28	956	1550	2370	328	1270	1170	491	-1440	310	420	904	3350
29	793	309	1450	976	---	1110	246	-1460	477	-96	813	8500
30	-387	958	1140	1270	---	1240	-260	24	-512	-417	1170	7520
31	-337	---	1330	695	---	481	---	-33	---	908	2400	---
TOTAL	13475	14546.0	24485	15990.0	11546	12329	5732.0	4690	25678	23661	25581	55423
MEAN	435	485	790	516	412	398	191	151	856	763	825	1850
MAX	1710	1700	2370	1880	1660	2140	1300	1460	1760	2430	2400	8500
MIN	-2580	-1000	-1260	-2850	-2620	-1330	-1130	-1460	-512	-601	-600	-2240

CAL YR 1988 TOTAL 300421.0 MEAN 821 MAX 5960 MIN -3370
WTR YR 1989 TOTAL 233136.0 MEAN 639 MAX 8500 MIN -2850

NOTE.--Negative figures indicate reverse flow.

ALTAMAHA-ST. MARYS RIVERS

COASTAL AREA BETWEEN ST. MARYS AND ST. JOHNS RIVERS

02231289 NASSAU RIVER NEAR HEDGES, FL--Continued

GAGE HEIGHT, IN FEET ABOVE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
TIDAL HIGH VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13.19	12.96	12.20	12.40	12.16	12.19	12.20	12.69	12.87	13.34	12.63	12.88
2	12.95	12.55	12.09	12.40	12.21	12.80	12.48	12.70	12.83	13.17	12.67	12.81
3	12.93	12.65	12.09	12.58	12.37	12.94	12.62	12.95	12.86	13.12	12.72	12.68
4	12.84	12.74	12.04	12.48	12.48	12.76	12.70	13.15	12.84	12.97	12.88	12.93
5	13.12	12.71	12.85	12.76	12.88	12.80	12.80	13.08	12.88	12.89	12.73	12.79
6	13.28	12.47	12.80	12.86	12.97	12.84	12.76	13.08	12.68	12.77	12.38	12.83
7	13.33	12.30	12.75	12.70	12.93	12.97	12.77	12.96	12.67	12.44	12.41	13.03
8	13.43	12.50	12.76	12.84	12.78	13.35	12.54	12.89	12.57	12.12	12.60	13.18
9	13.27	12.62	12.81	12.89	12.85	13.43	12.61	12.91	12.44	12.05	12.80	13.02
10	13.28	12.78	13.03	13.23	12.84	13.68	12.77	12.56	11.86	12.27	12.86	13.03
11	13.12	12.71	13.03	13.12	12.73	13.61	12.83	12.30	12.07	12.19	12.76	12.99
12	12.92	13.11	13.53	12.96	12.48	13.32	12.91	12.51	12.39	12.30	12.77	13.11
13	13.21	12.98	13.05	12.74	12.51	12.93	12.82	12.32	12.24	12.22	12.83	13.26
14	13.09	12.82	12.81	12.77	12.38	12.74	12.58	12.42	12.26	12.25	12.95	13.16
15	13.03	12.78	12.57	12.77	12.18	12.50	12.56	12.47	12.28	12.59	12.94	13.07
16	12.92	12.86	12.61	12.44	12.26	12.27	12.53	12.52	12.42	12.65	12.93	13.05
17	12.87	12.60	12.75	12.63	12.75	12.49	12.48	12.62	12.53	12.66	12.95	13.06
18	12.88	12.80	12.66	12.71	13.14	12.53	12.56	12.74	12.61	12.80	12.95	13.20
19	12.79	13.02	12.67	12.57	13.05	12.64	12.54	12.78	12.73	12.80	12.90	13.33
20	13.43	12.99	12.74	12.59	12.99	12.88	12.98	12.84	12.74	12.83	12.98	13.10
21	13.17	12.78	12.79	13.05	12.81	12.56	13.05	12.81	12.73	12.85	12.98	13.21
22	13.07	13.17	12.79	13.57	12.64	13.04	13.08	12.68	12.68	12.88	12.83	12.74
23	13.18	13.45	12.99	13.35	12.24	13.10	12.93	12.71	12.64	12.82	12.68	12.70
24	13.24	13.37	12.87	13.09	11.91	13.08	12.60	12.46	12.67	12.74	12.58	13.51
25	13.29	13.13	12.70	12.73	12.29	12.78	12.64	12.54	12.54	12.73	12.73	13.32
26	13.22	13.06	12.84	12.52	12.49	12.65	12.43	12.59	12.74	12.85	12.98	12.92
27	13.22	12.76	12.83	12.32	12.01	12.61	12.39	12.48	12.75	12.76	12.99	13.62
28	13.11	12.21	12.48	12.46	12.08	12.44	12.49	12.76	12.85	12.59	12.92	13.89
29	12.95	12.60	12.23	12.48	---	12.38	12.59	13.10	12.91	12.66	12.93	13.75
30	13.15	12.48	12.34	12.37	---	12.31	12.61	12.94	13.28	12.82	12.85	13.36
31	13.17	---	12.36	11.90	---	12.10	---	12.88	---	12.72	12.89	---
MEAN	13.12	12.80	12.68	12.72	12.55	12.80	12.66	12.72	12.62	12.67	12.81	13.12
MAX	13.43	13.45	13.53	13.57	13.14	13.68	13.08	13.15	13.28	13.34	12.99	13.89
MIN	12.79	12.21	12.04	11.90	11.91	12.10	12.20	12.30	11.86	12.05	12.38	12.68

CAL YR 1988 MEAN 12.78 MAX 13.61 MIN 11.61
WTR YR 1989 MEAN 12.77 MAX 13.89 MIN 11.86

ALTAMAHA-ST. MARYS RIVERS

COASTAL AREA BETWEEN ST. MARYS AND ST. JOHNS RIVERS

02231289 NASSAU RIVER NEAR HEDGES, FL--Continued

GAGE HEIGHT, IN FEET ABOVE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
TIDAL LOW VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.61	9.91	8.15	8.12	7.84	8.77	7.29	8.07	7.62	9.44	7.41	9.04
2	9.15	9.19	8.12	8.52	7.66	9.34	7.80	7.37	7.23	8.80	7.95	8.76
3	9.32	8.83	8.10	8.19	7.32	9.11	7.89	7.72	7.25	8.31	8.51	8.51
4	9.10	9.24	7.71	7.61	7.12	8.53	7.67	8.27	7.48	8.10	8.81	9.08
5	9.85	8.60	8.64	7.88	7.63	8.05	7.42	8.06	7.36	8.75	8.37	9.30
6	10.27	8.05	8.70	8.13	8.08	7.89	6.94	7.63	7.30	7.93	7.98	9.20
7	10.91	7.41	8.12	7.45	8.08	7.83	6.40	7.65	7.71	7.69	8.27	9.52
8	10.99	7.52	7.88	7.63	7.91	9.16	7.02	8.23	7.87	7.33	8.46	10.22
9	10.60	7.73	7.79	7.76	8.02	10.09	7.51	7.93	7.34	7.59	9.21	9.80
10	10.31	7.94	8.06	8.73	7.93	10.60	8.24	7.47	7.27	7.95	9.49	9.52
11	9.72	7.96	8.41	9.25	7.64	9.90	9.00	8.11	7.62	7.80	9.08	9.10
12	9.01	8.78	9.71	8.83	7.56	8.73	9.38	8.43	8.00	7.78	8.77	9.03
13	8.94	9.03	9.25	7.57	7.61	8.66	9.00	8.25	7.81	7.63	8.83	9.47
14	9.64	8.42	8.39	8.69	7.34	8.24	8.91	8.26	7.40	7.33	8.48	9.34
15	9.26	8.35	7.97	7.58	7.47	7.79	8.72	8.29	7.45	7.81	8.33	8.95
16	9.07	8.80	8.29	7.61	7.35	7.98	8.40	8.14	7.60	7.82	8.15	8.87
17	8.89	8.37	7.83	7.48	7.48	7.81	8.24	8.15	7.47	7.40	8.17	8.44
18	8.83	8.25	7.82	7.99	9.80	8.31	8.13	8.19	7.63	7.53	8.45	8.58
19	8.64	9.05	7.88	7.47	9.43	8.07	7.88	8.26	7.85	7.79	8.53	9.45
20	9.06	8.96	7.55	7.22	9.22	9.13	8.05	8.40	8.09	7.92	8.69	9.10
21	9.82	7.66	7.56	7.48	8.96	8.10	9.14	8.14	7.81	8.48	8.81	9.16
22	9.39	8.11	7.50	10.00	8.20	7.95	8.92	8.11	7.87	8.45	8.19	8.53
23	9.15	9.68	7.99	10.62	7.07	10.09	7.95	7.73	7.96	8.45	7.67	8.14
24	9.28	8.90	8.16	9.61	6.92	8.72	8.23	7.76	8.08	8.15	7.32	8.81
25	8.65	9.05	7.89	8.73	8.13	8.27	7.98	8.03	7.86	7.88	7.89	10.76
26	8.84	8.54	8.11	8.30	7.87	8.29	7.80	8.07	8.25	8.22	8.63	9.28
27	8.80	8.24	8.85	8.01	7.94	8.14	8.06	7.86	7.94	8.01	8.82	9.29
28	8.95	7.66	8.00	8.62	7.73	8.06	8.23	8.08	7.77	7.28	8.57	11.80
29	8.54	8.11	8.01	8.39	---	8.23	8.52	9.74	7.78	7.33	8.61	11.11
30	9.24	8.56	8.64	7.85	---	7.81	8.25	8.70	8.57	7.67	8.67	10.34
31	10.23	---	8.58	7.86	---	7.36	---	8.06	---	7.90	8.85	---
MEAN	9.42	8.50	8.18	8.23	7.90	8.55	8.10	8.10	7.71	7.95	8.45	9.35
MAX	10.99	9.91	9.71	10.62	9.80	10.60	9.38	9.74	6.57	9.44	9.49	11.80
MIN	8.54	7.41	7.50	7.22	6.92	7.36	6.40	7.37	7.23	7.28	7.32	8.14

CAL YR 1988 MEAN 8.33 MAX 10.99 MIN 6.61
WTR YR 1989 MEAN 8.37 MAX 11.80 MIN 6.40

ALTAMAHA-ST. MARYS RIVER

COASTAL AREA BETWEEN ST. MARYS AND ST. JOHNS RIVERS

02231299885 INTRACOASTAL WATERWAY NEAR CEDAR POINT, FL

LOCATION.--Lat 30°27'42", long 81°26'59", in NW¼ sec. , T.1 N., R.28 E., Duval County, Hydrologic Unit 03070205, at channel marker 67 in Gunnison Cut, 0.9 mi north of the confluence of Sisters Creek and Fort George River, 1.5 mi northeast of Cedar Point, and 15.6 mi south of Fernandina Beach.

DRAINAGE AREA.--Indeterminate.

GAGE-HEIGHT RECORDS

PERIOD OF RECORD.--February 1987 to current year.

GAGE.--Satellite data collection platform. Datum of gage is 10 ft below National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Stage affected by tide. The stage record published is the maximum and minimum tide event for each calendar day.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height 17.75 ft, Mar. 9, 1989; minimum, 8.72 ft, Apr. 7, 1989.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 17.75 ft, Mar. 9; minimum, 8.72 ft, Apr. 7.

GAGE HEIGHT, IN FEET ABOVE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
TIDAL HIGH VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16.57	16.11	14.80	15.04	14.49	14.76	14.88	15.73	16.22	16.09	15.59	15.85
2	16.19	15.38	14.66	15.11	14.72	15.75	15.33	15.86	16.19	16.80	15.81	15.63
3	15.99	15.46	14.75	15.47	14.94	16.14	15.66	16.37	16.32	16.41	16.09	15.55
4	15.94	15.63	14.63	14.81	15.16	15.83	15.89	16.82	16.29	16.24	15.75	16.01
5	16.31	15.63	15.93	15.90	16.01	15.99	16.17	16.75	15.89	15.89	15.73	15.71
6	16.61	15.35	15.91	15.67	16.24	16.13	16.06	16.51	15.69	15.77	15.15	15.80
7	16.76	15.14	15.86	15.27	15.94	16.40	15.73	16.31	15.73	14.64	15.24	16.08
8	17.08	15.37	15.89	15.63	15.91	17.11	15.75	16.15	15.56	14.87	15.39	16.33
9	16.70	15.61	16.01	15.63	16.00	17.75	15.73	16.27	15.33	14.73	15.75	16.06
10	16.71	15.95	16.45	16.37	15.98	17.60	15.98	15.59	14.56	14.89	15.87	16.15
11	16.51	15.77	16.60	16.04	15.50	17.54	16.08	15.07	14.64	14.86	15.70	16.11
12	16.13	16.44	17.29	15.71	15.30	17.05	16.13	15.43	15.09	15.02	15.74	16.49
13	16.62	16.21	16.57	15.26	15.30	16.19	15.85	15.02	14.99	15.03	15.89	16.81
14	16.38	15.92	16.02	15.57	15.18	15.82	15.43	15.16	14.95	15.02	16.23	16.69
15	16.25	15.87	15.57	15.35	14.92	15.35	15.39	15.24	14.99	15.52	16.28	16.49
16	16.07	15.97	15.68	14.63	15.05	15.00	15.38	15.35	15.21	15.68	16.31	16.45
17	15.95	15.57	15.93	15.00	15.83	15.31	15.30	15.55	15.39	15.74	16.36	16.53
18	16.02	15.85	15.83	15.16	16.46	15.43	15.47	15.79	15.63	16.03	16.20	16.83
19	15.87	16.33	15.83	14.56	16.41	15.56	15.47	15.95	15.89	16.15	16.19	16.96
20	17.00	16.35	15.97	14.89	16.29	15.99	16.20	16.03	15.91	16.15	16.37	16.43
21	16.64	16.03	15.97	15.57	15.96	15.49	16.48	15.69	15.30	16.06	16.31	16.71
22	16.56	16.70	16.07	15.84	15.57	16.28	16.16	15.79	15.61	16.09	15.99	15.73
23	16.78	17.28	16.44	15.69	14.90	16.37	15.59	15.33	15.72	15.88	15.67	15.62
24	16.94	17.12	16.10	15.46	15.04	15.83	15.57	15.35	15.75	15.79	15.55	16.81
25	17.06	16.60	15.75	14.87	15.25	15.61	15.60	15.52	15.49	15.78	15.80	16.59
26	16.90	16.35	15.99	14.63	15.29	15.51	15.29	15.59	15.85	16.03	16.21	15.98
27	16.82	15.88	15.99	14.29	14.66	15.31	15.23	15.39	15.87	15.88	16.28	17.08
28	16.56	14.81	15.32	14.59	14.69	15.26	15.32	15.85	16.02	15.60	16.15	16.99
29	16.18	15.49	14.89	14.82	---	15.15	15.51	16.35	15.78	15.77	16.21	16.69
30	16.49	15.23	15.03	14.76	---	14.99	15.46	16.24	16.94	16.07	16.02	16.27
31	16.44	---	14.99	13.83	---	14.71	---	16.17	---	15.88	15.90	---
MEAN	16.48	15.91	15.77	15.21	15.46	15.91	15.67	15.81	15.63	15.69	15.93	16.31
MAX	17.06	17.28	17.29	16.37	16.46	17.75	16.48	16.82	16.94	16.80	16.37	17.08
MIN	15.87	14.81	14.63	13.83	14.49	14.71	14.88	15.02	14.56	14.64	15.15	15.55

WTR YR 1989 MEAN 15.82 MAX 17.75 MIN 13.83

ALTAMAHA-ST. MARYS RIVER

COASTAL AREA BETWEEN ST. MARYS AND ST. JOHNS RIVERS

0223129985 INTRACOASTAL WATERWAY NEAR CEDAR POINT, FL--Continued

GAGE HEIGHT, IN FEET ABOVE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
TIDAL LOW VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11.89	12.18	10.93	11.08	10.17	11.45	10.23	10.31	9.72	11.65	9.68	10.95
2	12.11	11.50	10.86	11.90	10.00	12.16	10.33	9.60	9.37	11.41	10.11	11.03
3	12.04	11.69	10.45	10.49	9.94	10.93	9.79	9.54	9.35	10.31	10.45	10.71
4	11.89	11.72	10.71	10.50	9.56	10.47	9.45	9.91	9.63	10.45	10.95	11.33
5	12.65	11.84	11.57	10.39	9.93	10.42	9.12	9.73	9.65	10.51	10.74	11.60
6	12.65	10.97	10.93	10.10	9.77	9.94	8.89	9.63	9.66	10.29	10.43	11.89
7	12.88	10.35	10.65	9.88	9.80	9.61	8.72	9.85	10.15	10.10	10.85	12.10
8	12.86	10.11	10.35	9.40	9.38	10.60	9.15	10.54	10.14	9.96	11.11	12.67
9	12.41	10.14	10.28	10.38	9.82	10.95	9.46	10.44	10.03	10.22	11.69	12.27
10	12.10	10.64	10.26	10.29	10.00	11.29	10.35	10.15	9.82	10.60	11.91	12.07
11	11.75	10.57	10.81	10.53	9.97	11.15	11.33	10.69	10.21	10.47	11.75	11.58
12	11.41	11.40	11.57	9.99	10.05	10.81	11.82	10.99	10.63	10.52	11.39	11.32
13	11.38	11.11	10.91	9.74	10.16	11.15	11.46	10.73	10.52	10.45	11.25	11.22
14	11.72	11.04	10.71	10.77	10.52	10.92	11.25	10.77	10.17	10.23	10.80	10.83
15	11.82	11.59	10.49	10.70	9.99	10.54	11.13	10.84	10.13	10.47	10.57	10.45
16	11.95	11.09	10.81	10.65	9.97	10.51	10.95	10.71	10.17	10.38	10.29	10.19
17	11.93	10.51	10.32	10.19	10.05	10.79	10.61	10.64	10.07	9.93	10.12	10.03
18	11.57	10.98	10.31	10.29	11.99	10.73	10.55	10.63	10.07	9.80	10.19	10.14
19	11.37	10.80	10.02	9.75	11.45	10.61	10.39	10.65	10.12	10.05	10.12	11.01
20	12.28	10.13	10.02	9.57	11.11	11.20	10.43	10.74	10.31	10.07	10.36	11.06
21	12.24	9.86	10.02	9.72	10.73	10.48	11.36	10.60	10.17	10.27	10.49	11.51
22	11.96	10.11	9.87	12.21	10.40	10.21	11.19	10.55	10.13	10.41	10.30	11.07
23	10.93	10.84	10.23	13.76	9.79	11.81	10.54	10.51	10.16	10.21	10.13	10.87
24	10.65	10.82	10.57	12.78	9.81	10.98	10.63	10.11	10.23	10.17	10.03	11.58
25	10.78	11.01	10.55	11.78	10.59	10.73	10.64	10.43	10.07	10.10	10.39	12.36
26	10.47	11.08	10.59	11.45	10.61	10.76	10.55	10.44	10.33	10.49	11.03	11.35
27	11.54	10.70	11.09	10.51	10.79	10.74	10.64	10.15	10.16	10.41	10.97	11.36
28	11.36	10.55	10.49	11.02	10.64	10.71	10.79	10.32	10.03	9.89	10.83	12.46
29	11.01	11.13	10.87	10.85	---	10.85	10.83	11.33	10.07	9.84	10.78	11.91
30	12.78	11.27	11.35	10.57	---	10.54	10.51	10.55	10.63	10.03	10.83	11.55
31	12.52	---	11.16	10.48	---	10.15	---	10.03	---	9.88	10.83	---
MEAN	11.84	10.92	10.64	10.70	10.25	10.78	10.44	10.39	10.06	10.31	10.69	11.35
MAX	12.88	12.18	11.57	13.76	11.99	12.16	11.82	11.33	10.63	11.65	11.91	12.67
MIN	10.47	9.86	9.87	9.40	9.38	9.61	8.72	9.54	9.35	9.80	9.68	10.03

WTR YR 1989 MEAN 10.70 MAX 13.76 MIN 8.72

ALTAMAHA-ST. MARYS RIVER

COASTAL AREA BETWEEN ST. MARYS AND ST. JOHNS RIVERS

02231289985 INTRACOASTAL WATERWAY NEAR CEDAR POINT, FL--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--February 1987 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: February 1987 to current year.
WATER TEMPERATURE: February 1987 to current year.

INSTRUMENTATION.--Water-quality monitor since February 1987. Specific conductance recorded at 15-minute intervals, water temperature recorded at 60-minute intervals.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 59,800 microsiemens, Aug. 5, 1988; minimum, 7,010 microsiemens, Apr. 5, 1987.
WATER TEMPERATURE: Maximum, 34.0°C, July 10, Aug. 10, 1987; minimum, 8.4°C, Jan. 16, 1988.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 57,300 microsiemens, Feb. 17; minimum, 25,300 microsiemens, Feb. 1.
WATER TEMPERATURE: Maximum, 32.1°C, Sept. 3; minimum, 9.8°C, Feb. 25.

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	52300	50600	42600	38700	37200	49700	47500	52600	56300	48900	52200	53800
2	51400	51000	41300	38800	39900	53000	49400	53600	56400	49200	52300	53500
3	50200	48400	39800	40200	45100	53400	50100	54900	53100	49200	53300	53400
4	46400	47800	39100	38000	48000	51400	50800	54900	52900	49100	53400	52000
5	48400	46300	4600	46100	51700	51400	51500	55700	52500	47700	52500	49800
6	49900	44500	46100	49500	49700	49700	51900	56000	51700	46600	52400	49500
7	50800	43300	44900	48500	50600	48600	51200	57000	51500	45200	51600	50600
8	50400	45200	44900	50200	50000	48400	51000	56500	51300	44700	52100	52300
9	50600	45400	45600	51000	51600	48000	51000	56200	50400	43500	51000	52600
10	50300	46100	46300	51700	49400	47600	51300	55900	47500	51500	50700	52100
11	50300	44900	45900	51700	50700	47400	51000	54500	48500	51000	49800	51700
12	49800	46000	46200	51700	49900	47300	50500	55000	49500	50800	49100	51300
13	50500	45400	46400	51100	49200	46100	51000	54500	48600	48200	48500	50500
14	50500	45100	45400	51100	46900	45200	51300	54600	48300	49100	48100	49500
15	50700	44900	44500	51100	51000	43600	50300	54500	47600	48000	48600	49700
16	50200	54900	44000	50500	53500	40300	50300	54400	49100	46100	49600	50600
17	49700	45900	44200	49900	57300	40500	50200	54500	53000	45000	49700	49400
18	48500	46900	44200	49600	57200	40400	49900	54500	51900	44200	52200	51300
19	47300	48300	44100	48800	57100	40700	49200	54500	51400	45300	51000	49800
20	48500	48600	44300	49200	56600	42200	49000	54800	51100	45800	52900	49900
21	46700	48200	44700	50000	56800	42300	49000	54900	50200	48300	54500	50100
22	46300	49000	44800	49400	55200	42000	49200	54600	49600	48000	54500	49400
23	46800	48400	45100	47800	53700	43500	49100	53900	48500	47500	54100	46300
24	48000	47800	44500	48200	52300	42600	48300	53700	47400	44600	52800	47400
25	48000	48400	42900	48500	52600	41600	47400	53500	47900	45100	52200	46200
26	45600	47600	44700	48600	53500	40500	47000	53400	48600	45700	52700	44400
27	48000	47000	44300	48400	49000	37900	43600	53000	49400	44900	53200	49000
28	47700	44600	42900	47100	43800	39800	41200	54400	49700	44400	53800	44000
29	47000	45500	40500	47400	---	40900	41300	55100	49800	47300	54000	42300
30	48500	42900	40600	44800	---	42200	40900	55300	49700	51600	53400	39400
31	48100	---	41200	37400	---	42300	---	55800	---	52200	54200	---
MAX	52300	54900	46400	51700	57300	53400	51900	57000	56400	52200	54500	53800

WTR YR 1989 MAX 57300

0223129985 INTRACOASTAL WATERWAY NEAR CEDAR POINT, FL--Continued

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MINIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	42100	39800	33600	30300	25300	38300	33800	37700	53600	48800	48000	48900
2	41400	38000	32900	30900	25700	47200	42200	46800	50600	48100	45600	48300
3	39500	45600	30200	29800	26700	49200	42800	48600	50800	48000	47200	46700
4	36200	45300	28600	29100	28600	47800	43500	50600	50100	46100	48600	44500
5	39400	41400	33200	29900	31500	46000	46300	52600	48700	46000	49300	41400
6	45900	37000	39500	39700	39700	43400	47900	53800	47900	44000	49200	42000
7	43600	37300	38000	38900	36700	44200	47500	54400	47500	43700	47600	45400
8	48300	36600	36700	39700	39700	44900	45900	54800	46100	42000	46700	46000
9	44100	37600	35800	41700	42600	44200	44800	53800	44400	40900	47100	48800
10	44700	39000	36500	46100	40900	43600	48000	51200	42500	41700	46700	47400
11	43600	40200	39400	47300	43000	43700	47800	50800	44100	44900	45900	46000
12	37700	42700	41700	47700	42200	43200	48600	51000	44300	44800	46500	45000
13	37300	43900	44300	47400	40900	42600	49400	51100	46000	43300	46000	44900
14	40700	43000	42600	47700	33400	39100	49900	52000	44500	41400	44600	44000
15	40200	42900	38900	46300	40000	35100	49300	52600	44600	42000	44000	43500
16	41800	42300	39500	43600	42400	33100	48700	50400	44300	43000	44700	38000
17	40500	41400	38100	43600	43500	33100	48400	51400	47900	41600	47200	35300
18	40200	43600	36700	44000	53100	34900	47100	51900	48200	41500	47100	39300
19	37100	45300	35400	41100	54800	33900	45600	52600	47900	41200	47900	43500
20	34100	45700	34400	41000	53800	37200	44600	53100	48600	42700	49000	45400
21	39000	44600	33100	42900	53800	36200	47000	52200	48400	43900	52000	45500
22	38000	46300	32900	45300	51100	35900	46500	51900	47200	45100	51500	42700
23	39800	45600	36100	44200	49400	37900	45600	50500	45200	43600	48700	41900
24	42400	46200	36000	44400	45000	37700	44600	49700	45600	43200	45700	40300
25	42000	46600	35000	44600	44400	37400	43100	49200	45900	43800	46500	41300
26	39700	44900	34500	44600	44600	35700	39400	48400	47000	43400	46000	39500
27	36600	40700	40300	39600	38200	35500	36700	48900	48000	43000	48100	38600
28	35300	33900	36500	40300	36400	36000	36100	49800	48500	42400	48600	40500
29	37700	31000	34400	37300	---	37400	37600	53600	48100	42900	49700	36900
30	42000	33900	33700	30900	---	35100	37800	53000	48500	43300	49400	32800
31	40600	---	32800	26100	---	33700	---	53500	---	47100	49300	---
MIN	34100	31000	28600	26100	25300	33100	33800	37700	42500	40900	44000	32800

WTR YR 1989   MIN 25300

ALTAMAHA-ST. MARYS RIVER

COASTAL AREA BETWEEN ST. MARYS AND ST. JOHNS RIVERS

0223129985 INTRACOASTAL WATERWAY NEAR CEDAR POINT, FL--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28.3	22.4	17.9	19.4	18.9	17.5	21.4	24.4	29.4	28.2	30.6	31.0
2	28.4	21.3	17.5	19.2	19.3	15.9	20.8	25.4	29.7	28.2	29.7	31.7
3	28.2	21.0	16.4	19.0	20.4	17.7	21.3	24.9	29.4	29.8	29.8	32.1
4	26.9	21.8	16.7	18.1	23.9	18.8	22.3	24.9	29.5	30.3	30.3	30.9
5	25.8	22.5	15.9	16.8	24.2	21.1	23.0	25.2	28.7	30.6	30.4	30.2
6	24.6	21.8	16.1	17.3	24.4	20.8	21.8	25.8	27.4	30.3	30.9	30.8
7	23.4	21.1	17.4	18.9	26.2	19.2	20.8	24.7	27.8	30.6	30.7	30.5
8	22.0	21.5	17.9	19.6	23.3	16.6	20.8	24.1	26.5	30.7	30.0	30.0
9	21.5	22.2	18.3	19.9	18.7	13.3	21.6	24.5	26.7	31.4	28.4	29.9
10	22.4	22.8	17.7	18.8	18.6	13.3	21.7	23.7	27.3	30.9	27.4	30.1
11	23.3	22.7	17.2	17.4	15.6	15.2	20.2	23.1	28.6	31.1	27.5	30.1
12	23.5	22.2	15.5	17.9	16.0	16.8	17.9	23.2	29.3	31.1	27.9	30.6
13	22.6	22.4	13.1	19.1	20.7	18.5	17.6	23.0	29.3	30.8	28.4	29.8
14	21.0	22.6	13.3	18.3	20.3	19.4	18.9	24.5	29.8	29.5	27.8	30.6
15	21.5	22.4	14.5	19.1	22.3	19.4	20.1	25.6	29.4	29.8	28.8	30.7
16	22.1	22.9	14.4	19.7	21.0	20.3	21.3	26.3	29.5	29.0	29.9	30.3
17	22.6	23.4	13.7	19.2	20.0	20.4	22.5	26.6	29.0	29.5	30.5	30.1
18	23.6	23.0	12.9	17.6	17.0	21.8	23.5	26.5	29.7	28.1	30.4	29.5
19	23.6	23.3	12.3	17.7	15.3	21.7	24.3	26.2	29.3	28.6	29.8	28.8
20	23.5	23.5	13.3	18.1	16.8	21.6	24.0	26.6	29.4	28.4	30.2	28.4
21	23.6	23.4	15.3	16.8	19.3	22.2	21.5	27.1	29.2	28.4	31.3	28.3
22	23.2	21.6	16.3	14.9	18.9	21.5	22.3	27.0	29.6	28.6	31.6	27.3
23	22.4	21.4	17.4	14.4	17.1	20.3	23.6	27.4	28.6	28.7	31.3	27.3
24	23.1	20.1	17.9	15.1	13.0	20.5	24.4	27.6	29.2	29.1	30.7	27.3
25	22.2	20.1	18.0	15.8	13.0	20.5	25.1	27.8	29.8	29.7	30.9	26.2
26	22.6	21.2	17.7	16.6	14.7	21.4	26.0	28.7	30.1	30.2	30.4	27.3
27	23.6	22.2	17.1	17.7	16.2	23.0	25.7	29.4	30.3	29.8	31.4	27.4
28	24.7	22.0	18.9	17.7	17.6	24.3	26.1	29.1	31.0	30.2	31.7	26.2
29	25.1	20.5	18.4	18.9	---	24.4	25.8	27.2	30.5	31.1	31.6	28.0
30	24.7	18.6	18.2	18.8	---	23.6	25.3	28.1	29.9	30.3	32.0	28.8
31	22.8	---	18.7	28.0	---	22.9	---	28.9	---	30.6	31.7	---
MAX	28.4	23.5	18.9	28.0	26.2	24.4	26.1	29.4	31.0	31.4	32.0	32.1

WTR YR 1989   MAX 32.1

ALTAMAHA-ST. MARYS RIVER

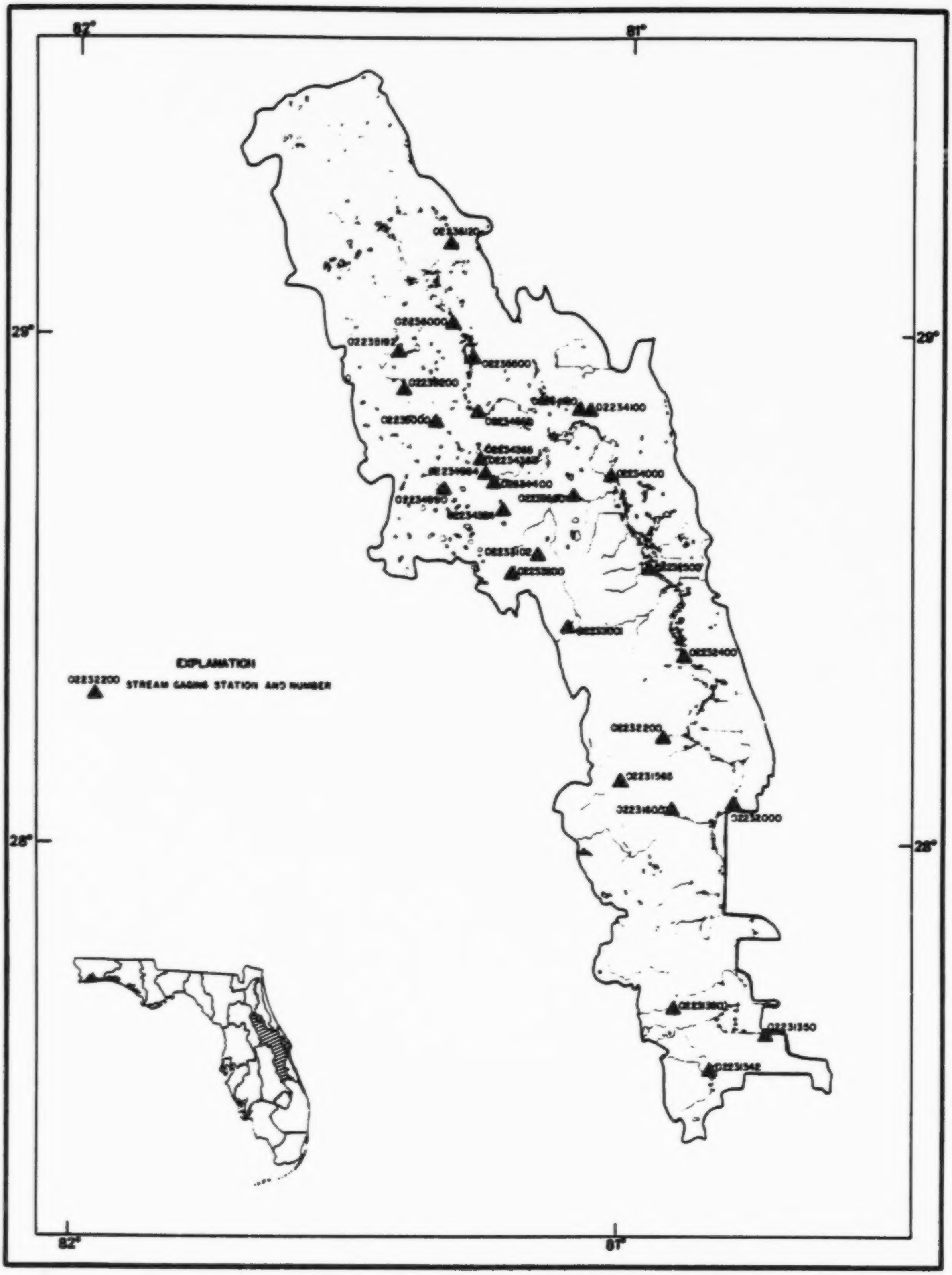
COASTAL AREA BETWEEN ST. MARYS AND ST. JOHNS RIVERS

0223129985 INTRACOASTAL WATERWAY NEAR CEDAR POINT, FL--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MINIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27.0	21.1	16.8	18.1	17.6	16.1	19.3	23.5	27.9	27.4	28.3	29.3
2	26.7	20.1	15.3	18.4	18.2	15.7	19.0	23.5	27.9	26.7	27.7	29.7
3	26.1	20.1	14.5	18.3	18.3	15.5	19.4	23.0	27.2	27.8	26.6	30.0
4	25.3	20.7	14.6	15.8	18.5	16.7	20.3	23.1	27.2	28.6	27.6	28.8
5	24.1	21.4	14.9	15.4	18.0	17.6	19.8	23.2	27.1	28.5	28.1	27.7
6	22.5	20.0	15.2	15.7	18.5	18.2	19.1	23.4	26.4	27.8	28.2	28.9
7	21.1	19.6	15.5	16.6	19.3	16.6	18.3	22.5	25.0	28.3	28.4	29.9
8	20.6	19.5	16.2	17.5	18.7	12.5	17.3	22.0	25.6	28.7	28.4	29.2
9	20.3	20.0	16.5	18.2	16.6	10.8	19.0	22.2	25.1	29.1	27.4	29.2
10	20.7	20.8	16.6	17.4	14.3	10.5	19.9	22.1	25.7	29.7	26.5	28.9
11	21.6	21.2	15.2	17.0	13.7	12.4	16.0	20.3	26.3	29.5	26.1	29.3
12	21.9	21.0	13.3	16.8	14.1	14.0	15.4	21.3	27.6	30.0	26.5	29.3
13	20.6	21.1	11.7	17.5	14.9	15.4	16.4	22.1	28.3	29.3	26.8	29.0
14	19.3	21.4	11.8	17.6	16.6	17.2	17.2	22.6	28.3	28.6	27.1	28.7
15	20.2	21.4	12.5	17.4	17.1	17.9	18.9	23.7	28.2	28.3	26.6	28.5
16	20.3	21.8	13.8	18.5	18.7	18.8	19.5	24.8	27.5	27.8	27.5	28.4
17	21.2	22.5	11.5	17.1	16.2	19.0	20.9	25.0	28.0	26.9	28.2	27.3
18	22.1	22.3	10.8	16.6	15.3	19.2	21.8	25.3	27.5	25.5	27.5	28.3
19	22.3	22.0	10.7	16.5	14.2	20.0	22.5	24.8	26.8	25.4	28.5	27.5
20	22.7	22.6	11.1	16.6	14.3	19.1	20.1	24.7	27.2	25.6	28.2	26.6
21	22.4	21.1	12.4	14.6	16.7	19.9	19.5	25.1	27.1	25.0	28.4	26.5
22	21.9	21.1	13.8	13.2	16.7	18.8	19.8	25.2	26.9	25.9	29.9	26.2
23	21.3	19.7	14.9	12.1	12.4	18.9	20.7	25.2	27.4	26.5	29.9	26.4
24	21.2	19.1	15.7	13.6	11.0	18.9	21.5	24.6	26.7	26.8	29.5	25.5
25	21.1	18.8	16.3	14.1	9.8	18.9	21.9	25.5	27.8	27.8	29.4	25.6
26	20.5	19.6	16.1	14.9	11.1	19.2	22.4	26.3	28.5	28.7	29.5	25.9
27	21.6	20.9	16.2	15.7	13.5	20.2	23.3	27.0	29.1	28.7	29.9	26.3
28	22.6	19.5	16.7	16.3	15.3	21.3	23.9	26.7	29.4	29.1	30.1	25.8
29	23.4	17.5	17.4	16.7	---	22.2	24.0	25.8	29.1	28.8	30.1	25.7
30	23.0	17.3	16.9	17.5	---	22.2	23.9	26.7	27.3	28.1	30.0	26.8
31	22.1	---	17.4	18.0	---	21.4	---	27.7	---	28.3	30.2	---
MIN	19.3	17.3	10.7	12.1	9.8	10.5	15.4	20.3	25.0	25.0	26.1	25.5

WTR YR 1989 MIN 9.8


82°
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02236120
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EXPLANATION
02232200 STREAM GAGING STATION AND NUMBER
02232200
02231565
02231600
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02231342

Figure 15.--Location of stream gaging stations in the St. Johns River basin above the Oklawaha River.

ST. JOHNS RIVER BASIN ABOVE OKLAWAHA RIVER

02231342 FORT DRUM CREEK AT SUNSHINE STATE PARKWAY, NEAR FORT DRUM, FL

LOCATION.--Lat 27°34'06", long 80°47'47", in NE¼ sec.35, T33 S., R.35 E., Okeechobee County, Hydrologic Unit 03080101, near right bank on downstream side of northbound bridge on Sunshine State Parkway, 2.7 mi southeast of the Fort Drum Service Plaza, and 3.0 mi north of Fort Drum.

DRAINAGE AREA.--52.6 mi^2.

PERIOD OF RECORD.--July 1969 to July 1970 (discharge measurements only), June 1977 to current year.

REVISED RECORDS.--WDR FL-79-1: 1978 (M).

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Brevard Engineering Co.).

REMARKS.--Records fair.

AVERAGE DISCHARGE.--12 years, 40.0 ft^3/s, 10.33 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,410 ft^3/s, Sept. 4, 1979; maximum gage height, 38.35 ft, Sept. 4,5, 1979; no flow for several days each year; creek dry at gage for many days in 1981.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 353 ft^3/s, Sept. 26,27, gage height, 36.61 ft; no flow many days; minimum gage height, 32.79 ft, June 19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.01	.00	.45	.93	.59	.01	.23	.16	.00	2.5	.89	108
2	.00	.00	.66	.85	.51	1.4	.18	.08	.00	2.7	2.3	127
3	.02	.00	.66	.86	.42	30	.15	.01	.00	4.0	6.6	82
4	.16	3.5	.70	.88	.34	68	.22	.00	.00	5.5	10	101
5	.13	7.7	.52	.81	.28	56	.38	.00	.00	4.6	6.6	139
6	.10	5.3	.50	.74	.23	30	.53	.00	.00	4.6	4.4	279
7	.07	2.9	.47	.65	.18	24	.62	.00	.00	3.3	3.2	287
8	.03	1.7	.37	.61	.17	30	.66	.00	.00	2.0	2.2	238
9	.00	1.1	.30	.59	1.8	34	.52	.00	.00	1.1	1.7	195
10	.00	.74	.24	.53	2.0	34	.43	.00	.00	.53	1.2	151
11	.00	.53	.31	.44	1.2	28	.34	.00	.00	.24	.93	116
12	.00	.37	1.5	.36	.79	20	.27	.00	.00	.11	.95	88
13	.00	.29	1.7	.29	.52	14	.28	.00	.00	.21	3.5	67
14	.00	.20	1.6	.24	.37	9.8	.52	.00	.00	.70	7.9	49
15	.00	.17	1.4	.19	.27	6.9	.63	.00	.00	.70	18	36
16	.00	.15	1.2	.15	.19	9.3	1.3	.00	.00	.40	25	28
17	.00	.13	.96	.12	.13	17	1.5	.00	.00	.19	21	49
18	.00	.11	.79	.11	.10	18	1.4	.00	.00	.11	19	177
19	.00	.09	.73	.10	.07	13	.80	.00	.00	.06	24	174
20	.00	.08	.73	.09	.05	8.4	.57	.00	.00	.01	66	127
21	.00	.06	.73	.09	.03	5.6	.67	.00	.00	.02	143	82
22	.00	.06	1.7	4.4	.08	4.0	.52	.00	.00	.90	132	50
23	.00	.10	1.2	8.1	.12	3.1	.31	.00	.00	.91	95	61
24	.00	.14	1.2	6.2	.08	2.5	.14	.00	.00	.41	65	52
25	.00	.11	1.3	3.8	.06	1.8	.05	.00	.04	.22	52	110
26	.00	.09	1.3	2.5	.05	1.4	.01	.00	.04	.14	58	305
27	.00	.07	1.3	1.8	.04	1.1	.00	.00	.00	.08	132	339
28	.00	.08	1.1	1.4	.03	.74	.00	.00	.00	.04	226	274
29	.00	.06	1.0	1.1	---	.51	.00	.00	.01	.00	264	199
30	.00	.05	1.0	.87	---	.36	.06	.00	.44	.00	219	139
31	.00	---	.99	.70	---	.25	---	.00	---	.03	148	---
TOTAL	0.52	25.88	28.61	40.50	10.70	473.17	13.29	0.25	0.53	36.31	1759.37	4229
MEAN	.017	.86	.92	1.31	.38	15.3	.44	.008	.018	1.17	56.8	141
MAX	.16	7.7	1.7	8.1	2.0	68	1.5	.16	.44	5.5	264	339
MIN	.00	.00	.24	.09	.03	.01	.00	.00	.00	.00	.89	28
CFSM	.00	.02	.02	.02	.01	.29	.01	.00	.00	.02	1.08	2.68
IN.	.00	.02	.02	.03	.01	.33	.01	.00	.00	.03	1.24	2.99

CAL YR 1988 TOTAL 4804.97 MEAN 13.1 MAX 192 MIN .00 CFSM .25 IN. 3.40
WTR YR 1989 TOTAL 6618.13 MEAN 18.1 MAX 339 MIN .00 CFSM .34 IN. 4.68

ST. JOHNS RIVER BASIN ABOVE OKLAWAHA RIVER

02231350 ST. JOHNS HEADWATERS NEAR VERO BEACH, FL

LOCATION.--Lat 27°38'26", long 80°40'43", in NW¼ sec.6, T.33 S., R.37 E., Indian River County, Hydrologic Unit 03080101, on upstream side of bridge on State Highway 60, 17.1 mi west of courthouse in Vero Beach, and 297 mi upstream from mouth.

DRAINAGE AREA.--297 mi^2.

PERIOD OF RECORD.--February 1942 to current year (gage heights only). Records of gage heights prior to October 1962 and revised records of gage heights for water years 1962-86 are unpublished and available in files of the Orlando Subdistrict Office.

GAGE.--Water-stage recorder. Datum of gage is 18.56 ft above National Geodetic Vertical Datum of 1929 (U.S. Army Corps of Engineers bench mark). Prior to May 21, 1974, at site 0.3 mi east at same datum.

REMARKS.--Stage affected by development of system of dikes and controls; not equivalent to earlier record of headwaters marsh.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily gage height, 9.24 ft, Sept. 5, 1979, estimated; minimum, -0.30 ft, May 23, 1970.

EXTREMES FOR CURRENT YEAR.--Maximum daily gage height, 7.07 ft, Sept. 19; minimum daily 2.29 ft, Mar. 1.

GAGE HEIGHT, IN FEET ABOVE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.00	5.31	5.40	---	5.35	2.29	5.99	5.81	5.32	5.36	5.84	6.11
2	5.98	5.01	5.39	---	5.34	2.49	5.97	5.80	5.30	5.37	5.83	6.11
3	5.97	4.58	5.36	---	5.33	4.04	5.95	5.78	5.29	5.38	5.82	6.12
4	5.96	5.10	5.34	---	5.32	5.62	5.95	5.77	5.27	6.08	5.82	6.12
5	5.94	5.60	5.32	---	5.31	5.89	5.96	5.75	5.25	6.59	5.80	6.13
6	5.93	5.66	5.35	---	5.30	5.98	5.94	5.73	5.23	6.56	5.78	6.14
7	5.92	5.68	5.37	---	5.31	6.00	5.91	5.71	5.24	6.22	5.75	6.15
8	5.90	5.69	5.35	---	5.30	6.21	5.89	5.69	5.29	5.91	5.73	6.14
9	5.89	5.64	5.33	---	5.33	6.32	5.87	5.67	5.28	5.83	5.72	6.16
10	5.87	5.58	5.31	---	5.32	6.30	5.85	5.65	5.28	5.78	5.74	6.18
11	5.85	5.58	5.33	---	5.30	6.28	5.83	5.64	5.29	5.74	5.73	6.19
12	5.66	5.55	5.38	---	5.28	6.27	5.74	5.62	5.27	5.71	5.72	6.20
13	5.29	5.53	5.38	---	5.27	6.28	5.67	5.60	5.25	5.69	5.74	6.21
14	5.57	5.51	5.37	---	5.28	6.27	5.72	5.60	5.27	5.67	5.76	6.21
15	5.72	5.50	5.36	---	5.29	6.26	5.69	5.66	5.26	5.65	6.53	6.21
16	5.72	5.48	5.34	---	5.08	6.24	5.70	5.59	5.24	5.63	6.54	6.21
17	5.73	5.47	5.32	---	4.71	6.24	5.76	5.50	5.22	5.63	6.08	6.22
18	5.69	5.44	5.29	---	4.47	6.24	5.83	5.46	5.21	6.19	6.16	6.77
19	5.60	5.42	5.28	---	4.26	6.23	5.84	5.38	5.21	6.64	6.44	7.07
20	5.61	5.40	5.34	4.78	4.04	6.21	5.86	5.23	5.23	6.29	6.52	6.77
21	5.64	5.41	5.39	4.77	3.63	6.17	5.88	5.13	5.24	6.01	6.56	6.55
22	5.63	5.48	5.40	5.00	3.14	6.14	5.87	5.02	5.25	6.05	6.92	6.51
23	5.62	5.53	5.41	5.19	3.14	6.12	5.86	5.02	5.24	6.00	6.96	6.53
24	5.57	5.54	5.42	5.27	2.79	6.11	5.84	5.02	5.23	5.95	6.59	6.51
25	5.51	5.54	5.42	5.29	2.55	6.10	5.84	5.10	5.24	5.93	6.35	6.48
26	5.49	5.54	---	5.30	2.55	6.08	5.82	5.32	5.24	5.89	6.27	6.46
27	5.47	5.54	---	5.32	2.52	6.06	5.81	5.35	5.24	5.90	6.23	6.45
28	5.44	5.43	---	5.33	2.38	6.05	5.79	5.36	5.23	5.92	6.22	6.43
29	5.41	5.35	---	5.33	---	6.03	5.78	5.36	5.27	5.88	6.18	6.41
30	5.37	5.33	---	5.33	---	6.02	5.80	5.35	5.33	5.87	6.15	6.41
31	5.34	---	---	5.34	---	6.00	---	5.34	---	5.86	6.13	---
MEAN	5.69	5.45	---	---	4.46	5.82	5.84	5.48	5.26	5.91	6.12	6.34
MAX	6.00	5.69	---	---	5.35	6.32	5.99	5.81	5.33	6.64	6.96	7.07
MIN	5.29	4.58	---	---	2.38	2.29	5.67	5.02	5.21	5.36	5.72	6.11

ST. JOHNS RIVER

ST. JOHNS RIVER BASIN ABOVE OKLAWAHA RIVER

02231390 COW LOG BRANCH NEAR YEEHAW JUNCTION, FL

LOCATION.--Lat 27°41'19", long 80°52'52", in SW¼ sec.13, T.32 S., R.34 E., Osceola County, Hydrologic Unit 03080101, on upstream side of bridge on State Highway 60, 1.6 mi southwest of Yeehaw Junction.

DRAINAGE AREA.--20.5 mi^2.

PERIOD OF RECORD.--1956, 1965, 1967 (one discharge measurement each year), October 1982 to current year (discharge measurements only).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge measured, 74 ft^3/s, July 24, 1984; no flow observed in 1956, 1967, 1989.

DISCHARGE MEASUREMENTS, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND
NOV 15...	1230	2.50	APR 20...	1036	.30
JAN 19...	0800	.00	JUN 29...	1325	.18
MAR 01...	1715	.87	AUG 17..	0920	8.13

02231565 CRABGRASS CREEK NEAR HOLOPAW, FL

LOCATION.--Lat 28°07'48, long 81°00'07", in SE¼ sec.15, T.27 S., R.33 E., Osceola County, Hydrologic Unit 03080101, on downstream side of bridge on U.S. Highway 192, 4.6 mi east of Holopaw.

DRAINAGE AREA.--30.2 mi^2.

PERIOD OF RECORD.--1965, 1967, 1969-70 (one to three discharge measurements each year), October 1970 to September 1983 (discharge measurements only), October 1983 to current year (annual peak discharge and periodic discharge measurements).

REVISED RECORDS.--WDR FL-72-3: Drainage area.

GAGE.--Nonrecording gage and crest-stage gage. Datum of gage is 34.93 ft above National Geodetic Vertical Datum of 1929.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,380 ft^3/s, Mar. 14, 1988, gage height 8.40 ft; maximum discharge measured, 571 ft^3/s, Mar. 14, 1988; no flow observed at times in many years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, <163 ft^3/s, gage height, <5.93 ft.

DISCHARGE MEASUREMENTS, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND
OCT 12...	1620	1.27	MAY 17...	1550	<.01
NOV 30...	1620	1.00	JUL 18...	1115	3.48
JAN 31...	1545	3.26	SEP 12...	1600	28.2
MAR 27...	1315	.96			

ST. JOHNS RIVER BASIN ABOVE OKLAWAHA RIVER

02231600 JANE GREEN CREEK NEAR DEER PARK, FL

LOCATION.--Lat 28°04'27", long 80°53'18", in SE¼ sec.2, T.28 S., R.34 E., Osceola County, Hydrologic Unit 03080101, near right bank on upstream side of bridge on county road, 1.2 mi southeast of Deer Park, 2 mi downstream from confluence of Crabgrass and Bull Creeks, and 5.8 mi upstream from mouth.

DRAINAGE AREA.--248 mi^2

PERIOD OF RECORD.--October 1953 to current year.

GAGE.--Water-stage recorder. Datum of gage is 18.55 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair.

AVERAGE DISCHARGE.--36 years, 228 ft^3/s, 12.48 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 18,400 ft^3/s, Oct 17, 1956, gage height, 10.95 ft, from rating curve extended above 11,000 ft^3/s; no flow for many days in some years; creek dry at gage at times in some years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 756 ft^3/s, Sept. 28, gage height, 5.73 ft; no flow May 20, May 25 to July 1; minimum gage height, 0.92 ft, June 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	48	3.1	14	9.6	87	6.2	3.1	2.1	.00	.00	12	231
2	38	3.0	14	9.2	73	22	2.6	2.6	.00	.01	12	219
3	36	2.9	14	8.9	62	39	2.1	2.2	.00	.04	11	194
4	40	4.8	14	8.6	53	64	2.0	1.9	.00	.05	10	176
5	33	5.7	13	8.3	45	79	2.5	1.5	.00	.06	9.5	160
6	28	5.7	13	7.9	39	91	2.4	1.3	.00	.06	8.6	150
7	26	5.5	14	7.6	33	101	1.9	1.0	.00	.06	7.7	143
8	23	5.3	14	7.4	28	109	1.5	.78	.00	.75	6.9	155
9	21	5.2	13	7.2	24	109	1.2	.61	.00	2.0	7.2	222
10	19	5.0	12	7.1	20	104	1.0	.44	.00	2.8	9.6	286
11	17	4.9	12	7.0	18	99	.84	.30	.00	3.0	10	312
12	15	4.9	14	6.9	16	94	.75	.18	.00	3.3	9.0	318
13	13	4.9	13	6.7	14	87	.69	.10	.00	3.3	9.1	322
14	12	4.8	13	6.5	13	76	.64	.10	.00	3.3	11	321
15	11	4.9	13	6.3	12	66	.64	.19	.00	3.2	16	326
16	11	5.0	14	6.1	11	57	.62	.15	.00	4.1	24	340
17	9.8	5.0	14	5.9	9.4	47	.51	.09	.00	5.9	36	328
18	9.0	5.0	14	5.7	8.3	39	.40	.04	.00	8.0	44	330
19	8.0	5.0	15	5.5	7.4	31	.30	.01	.00	11	43	336
20	7.2	4.9	15	5.9	6.6	25	.58	.00	.00	12	40	322
21	6.5	4.9	15	9.4	6.0	21	2.4	.01	.00	12	35	318
22	5.9	5.1	14	81	5.8	18	2.7	.07	.00	14	28	350
23	5.3	8.4	14	116	5.3	15	2.5	.08	.00	13	26	394
24	5.0	9.0	13	150	4.7	13	2.1	.04	.00	12	49	396
25	4.6	9.0	13	175	4.4	11	1.7	.00	.00	12	105	391
26	4.1	9.0	12	177	4.2	9.0	1.4	.00	.00	12	177	520
27	3.8	9.3	12	173	4.0	7.6	1.1	.00	.00	12	219	687
28	3.5	11	11	158	3.9	6.4	.91	.00	.00	11	253	747
29	3.2	12	11	140	---	5.3	.99	.00	.00	11	280	713
30	3.1	13	10	121	---	4.4	1.7	.00	.00	13	277	539
31	3.1	---	9.9	102	---	3.7	---	.00	---	13	250	---
TOTAL	473.1	186.2	406.9	1546.7	618.0	1459.6	43.77	15.79	0.00	197.93	2035.6	10346
MEAN	15.3	6.21	13.1	49.9	22.1	47.1	1.46	.51	.00	6.38	65.7	345
MAX	48	13	15	177	87	109	3.1	2.6	.00	14	280	747
MIN	3.1	2.9	9.9	5.5	3.9	3.7	.30	.00	.00	.00	6.9	143
CFSM	.06	.03	.05	.20	.09	.19	.01	.00	.00	.03	.26	1.39
IN.	.07	.03	.06	.23	.09	.22	.01	.00	.00	.03	.31	1.55

CAL YR 1988 TOTAL 47606.27 MEAN 130 MAX 2150 MIN .00 CFSM .52 IN. 7.14
WTR YR 1989 TOTAL 17329.59 MEAN 47.5 MAX 747 MIN .00 CFSM .19 IN. 2.60

ST. JOHNS RIVER BASIN ABOVE OKLAWAHA RIVER

02232000 ST. JOHNS RIVER NEAR MELBOURNE, FL

LOCATION.--Lat 28°05'04", long 80°45'08", in NW¼ sec.5, T.28 S., R.36 E., Brevard County, Hydrologic Unit 03080101, near center of span on upstream side of bridge on U.S. Highway 192, 1.1 mi downstream from Sawgrass Lake, 1.7 mi upstream from Lake Washington, 9.2 mi west of Melbourne, and 262 mi upstream from mouth.

DRAINAGE AREA.--968 mi^2.

PERIOD OF RECORD.--October 1939 to current year. Monthly discharge only for October 1939, published in WSP 1304.

GAGE.--Water-stage and deflection-meter recorder. Datum of gage is 11.22 ft above National Geodetic Vertical Datum of 1929. Prior to July 26, 1940, nonrecording gage, and July 26, 1940 to Jan. 11, 1973, water-stage recorder at site 200 ft upstream at same datum. Oct. 1, 1969, to Oct. 5, 1972, and Oct. 1, 1982, to Sept. 30, 1983, water-stage recorder for Lake Washington near Eau Gallie (station 02232100) used as auxiliary gage for this station.

REMARKS.--Estimated daily discharges: Jan. 23-31. Records poor.

AVERAGE DISCHARGE.--50 years, 662 ft^3/s, 479,620 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 18,000 ft^3/s, Oct. 18, 1956; maximum gage height, 9.66 ft, Sept. 30, 1960; maximum daily reverse flow, 118 ft^3/s, May 23, 1984, affected by wind; minimum gage height, -1.28 ft, May 27, 1975.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 665 ft^3/s, Sept. 30, stage rising, peak occurred Oct. 1, 1989; maximum gage height recorded, 3.23 ft, Jan. 31; but may have been higher during period of no gage-height record Jan. 23-31; minimum daily discharge, 26 ft^3/s, Aug. 3; minimum gage height, 1.57 ft, Aug. 9, affected by wind.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	242	69	92	71	375	96	137	152	95	79	32	79
2	225	68	90	71	366	111	159	144	98	74	32	79
3	214	63	83	69	357	136	147	131	100	75	26	79
4	229	76	81	74	348	156	145	130	95	75	32	73
5	225	79	81	68	331	162	127	134	97	80	46	79
6	233	86	76	64	314	166	146	117	94	74	50	84
7	218	85	76	64	294	185	115	112	88	70	64	84
8	192	83	79	64	278	210	107	111	89	64	68	80
9	172	81	76	64	278	233	102	110	100	60	46	81
10	160	78	76	68	250	266	102	108	82	63	32	82
11	142	76	81	66	222	298	100	105	82	63	47	89
12	133	76	94	62	206	354	102	104	86	62	47	89
13	127	74	88	62	182	290	92	103	89	48	47	98
14	127	78	83	60	169	297	92	113	88	62	58	116
15	121	74	83	57	162	283	92	100	87	57	53	123
16	121	71	85	60	154	296	87	103	92	44	68	137
17	116	71	86	60	145	269	75	103	77	31	73	141
18	114	71	83	57	145	275	92	110	77	47	68	183
19	107	66	81	55	139	253	92	119	76	72	68	193
20	105	64	78	57	124	250	98	129	79	62	69	200
21	100	66	78	68	107	212	106	111	89	62	59	206
22	96	64	78	196	114	201	109	107	144	63	60	198
23	90	86	76	250	114	231	116	111	136	72	60	261
24	86	96	76	305	102	201	107	107	102	72	60	333
25	85	90	78	340	98	189	115	103	81	72	60	354
26	79	86	79	355	96	202	118	110	81	67	70	370
27	76	85	74	370	86	186	106	106	66	62	65	391
28	72	88	71	375	88	171	110	102	69	61	70	400
29	72	88	76	380	---	163	124	105	79	61	75	522
30	71	86	74	380	---	154	128	104	83	52	80	665
31	69	---	72	380	---	142	---	100	---	37	80	---
TOTAL	4219	2324	2484	4672	5644	6638	3348	3512	2701	1943	1765	5869
MEAN	136	77.5	80.1	151	202	214	112	113	90.0	62.7	56.9	196
MAX	242	96	94	380	375	354	159	152	144	80	80	665
MIN	69	63	71	55	86	96	75	100	66	31	26	73
AC-FT	8370	4610	4930	9270	11190	13170	6640	6970	5360	3850	3500	11640

CAL YR 1988 TOTAL 131385 MEAN 359 MAX 1750 MIN 63 AC-FT 260600
WTR YR 1989 TOTAL 45119 MEAN 124 MAX 665 MIN 26 AC-FT 89490

ST. JOHNS RIVER

ST. JOHNS RIVER BASIN ABOVE OKLAWAHA RIVER

02232000 ST. JOHNS RIVER NEAR MELBOURNE, FL--Continued

GAGE HEIGHT, IN FEET ABOVE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.88	2.26	2.39	2.27	3.20	2.41	2.59	2.52	2.07	1.76	1.79	1.94
2	2.84	2.25	2.38	2.27	3.18	2.48	2.54	2.61	2.04	1.76	1.79	1.93
3	2.81	2.22	2.34	2.26	3.16	2.57	2.53	2.59	2.01	1.77	1.78	1.92
4	2.85	2.30	2.33	2.29	3.14	2.64	2.49	2.56	1.97	1.78	1.78	1.91
5	2.84	2.32	2.33	2.25	3.10	2.66	2.50	2.51	1.93	1.78	1.75	1.92
6	2.86	2.36	2.30	2.23	3.06	2.67	2.51	2.50	1.92	1.76	1.73	1.94
7	2.82	2.35	2.30	2.23	3.01	2.73	2.45	2.48	1.95	1.77	1.70	1.93
8	2.75	2.34	2.32	2.23	2.97	2.80	2.43	2.45	1.98	1.74	1.68	1.97
9	2.69	2.33	2.30	2.23	2.97	2.86	2.42	2.40	2.00	1.73	1.74	2.01
10	2.65	2.31	2.30	2.25	2.90	2.94	2.39	2.36	2.04	1.69	1.79	2.05
11	2.59	2.30	2.33	2.24	2.83	2.94	2.45	2.38	2.03	1.67	1.82	2.09
12	2.56	2.30	2.40	2.21	2.79	2.93	2.41	2.34	2.00	1.65	1.80	2.11
13	2.54	2.29	2.37	2.21	2.72	2.93	2.41	2.32	1.98	1.63	1.83	2.15
14	2.54	2.31	2.34	2.20	2.68	2.93	2.38	2.28	1.96	1.62	1.87	2.19
15	2.52	2.29	2.34	2.18	2.66	2.93	2.38	2.33	1.92	1.61	1.88	2.23
16	2.52	2.27	2.35	2.20	2.63	2.92	2.44	2.32	1.88	1.62	1.89	2.31
17	2.50	2.27	2.36	2.20	2.60	2.92	2.42	2.30	1.87	1.68	1.90	2.40
18	2.49	2.27	2.34	2.18	2.60	2.91	2.40	2.31	1.85	1.81	1.88	2.53
19	2.46	2.24	2.33	2.17	2.58	2.89	2.39	2.27	1.83	1.84	1.89	2.63
20	2.45	2.23	2.31	2.18	2.53	2.85	2.41	2.25	1.78	1.85	1.92	2.68
21	2.43	2.24	2.31	2.25	2.46	2.81	2.52	2.23	1.77	1.86	1.96	2.72
22	2.41	2.23	2.31	2.76	2.49	2.78	2.50	2.22	1.80	1.88	1.97	2.72
23	2.38	2.36	2.30	---	2.49	2.77	2.48	2.22	1.82	1.87	1.98	2.82
24	2.36	2.41	2.30	---	2.44	2.77	2.45	2.21	1.83	1.87	1.98	2.88
25	2.35	2.38	2.31	---	2.42	2.75	2.44	2.21	1.83	1.86	1.98	2.82
26	2.32	2.36	2.32	---	2.41	2.72	2.42	2.20	1.82	1.87	1.98	2.97
27	2.30	2.35	2.29	---	2.36	2.69	2.41	2.18	1.79	1.83	1.98	2.99
28	2.28	2.37	2.27	---	2.37	2.66	2.40	2.17	1.75	1.79	1.98	3.03
29	2.28	2.37	2.30	---	---	2.62	2.42	2.15	1.76	1.80	1.98	3.06
30	2.27	2.36	2.29	---	---	2.56	2.53	2.13	1.77	1.82	1.97	3.13
31	2.26	---	2.28	---	---	2.57	---	2.10	---	1.81	1.96	---
MEAN	2.54	2.31	2.32	---	2.74	2.76	2.45	2.33	1.90	1.77	1.87	2.40
MAX	2.88	2.41	2.40	---	3.20	2.94	2.59	2.61	2.07	1.88	1.98	3.13
MIN	2.26	2.22	2.27	---	2.36	2.41	2.38	2.10	1.75	1.61	1.68	1.91

CAL YR 1988   MEAN 3.13   MAX 5.10   MIN 2.22

ST. JOHNS RIVER BASIN ABOVE OKLAWAHA RIVER

02232200 WOLF CREEK NEAR DEER PARK, FL

LOCATION.--Lat 28°12'46", long 80°54'40", in NW¼ sec.22, T.26 S., R.34 E., Osceola County, Hydrologic Unit 03080101, near right bank on upstream side of bridge on State Highway 419, 2.9 mi upstream from mouth, and 8.5 mi north of Deer Park.

DRAINAGE AREA.--25.7 mi^3.

PERIOD OF RECORD.--January 1956 to current year.

GAGE.--Water-stage recorder. Datum of gage is 19.35 ft above National Geodetic Vertical Datum of 1929. Prior to July 13, 1967, at site 0.8 mi downstream at same datum.

REMARKS.--Estimated daily discharges: Oct. 1-13. Records fair. Flow regulated to some extent since October 1970 by the construction of Jane Green Reservoir; levees were constructed and an interconnecting canal was dug joining the watershed areas of Taylor, Pennywash, Cox, and Wolf Creeks.

AVERAGE DISCHARGE.--33 years, 31.7 ft^3/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,700 ft^3/s Oct. 16, 1956, gage height, 7.93 ft, from rating curve extended above 1,400 ft^3/s; maximum gage height, 10.2 ft, estimated, Aug. 28, 1964, present site; no flow for many days in some years; minimum gage height, 1.01 ft, Aug. 14, 1972, caused by temporary earthen dam upstream and pumpage from gage pool; prior to Aug 14, 1972, minimum gage height observed, 2.23 ft, May 9, 1967, present site.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,120 ft^3/s, Sept. 25, gage height, 8.30 ft; minimum daily discharge, 0.08 ft^3/s, Oct. 30,31, Nov. 3; minimum gage height, 2.92 ft, Sept. 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	38	.09	1.8	1.6	10	2.7	1.9	13	1.7	4.5	2.3	5.6
2	32	.09	1.6	1.6	8.7	16	1.6	34	1.3	4.9	2.0	24
3	28	.08	1.4	1.6	7.5	42	1.3	17	.94	6.1	2.2	51
4	30	.67	1.2	1.5	6.8	58	1.3	6.9	.68	5.1	2.0	32
5	22	3.4	1.1	1.4	6.2	31	2.1	3.9	.50	21	1.6	25
6	16	5.0	1.1	1.3	5.7	20	2.1	2.6	.39	33	1.1	33
7	11	3.9	2.2	1.2	5.1	17	1.7	1.9	.48	15	.76	21
8	9.0	2.7	2.5	1.2	4.6	30	1.3	1.3	.64	8.4	.49	14
9	6.4	2.1	2.2	1.2	4.4	41	.92	.92	1.5	5.5	.34	78
10	4.8	1.8	1.9	1.1	4.3	32	.69	.70	1.6	3.5	.62	142
11	3.6	1.5	1.9	1.1	4.0	23	.54	.54	1.1	3.8	13	94
12	2.7	1.3	8.0	1.1	3.6	17	.48	.39	.69	11	13	63
13	1.7	1.2	9.0	1.1	3.3	13	.46	.29	.43	18	79	43
14	1.1	1.0	5.9	1.1	3.2	10	.47	.50	.67	17	52	30
15	.90	.88	4.7	1.0	3.0	8.4	.89	18	.99	13	32	36
16	.73	.80	4.1	1.0	2.8	7.3	2.7	12	.73	8.7	17	57
17	.65	.71	3.4	1.1	2.6	9.1	2.4	4.5	.41	7.1	10	56
18	.65	.62	2.9	1.2	2.4	11	1.8	2.5	.24	6.2	6.3	113
19	.62	.56	2.5	1.1	2.3	8.6	1.3	1.7	.17	15	5.3	107
20	.56	.51	2.3	1.1	2.2	6.7	1.0	1.2	.13	57	11	69
21	.53	.48	2.3	2.5	2.2	5.6	3.1	5.7	.11	82	70	48
22	.42	.48	2.2	329	4.0	4.7	4.2	264	.12	53	67	32
23	.33	2.5	2.1	165	5.6	4.5	3.1	92	.49	39	57	71
24	.25	7.1	2.0	76	4.2	4.2	2.1	36	2.2	26	37	476
25	.22	5.3	2.0	50	3.5	3.6	1.5	16	2.2	18	26	857
26	.16	3.6	1.8	35	3.1	3.3	.98	9.5	1.2	12	72	360
27	.13	3.0	1.6	26	2.8	3.0	.64	6.3	.66	7.9	40	188
28	.11	2.5	1.5	20	2.5	2.6	.43	4.3	.40	5.5	23	125
29	.09	2.2	1.5	16	---	2.2	1.9	3.3	2.4	3.9	13	94
30	.08	2.0	1.5	14	---	2.0	24	2.9	7.3	3.2	8.4	74
31	.08	---	1.6	11	---	1.8	---	2.2	---	2.7	5.9	---
TOTAL	212.81	58.07	81.8	769.1	120.6	441.3	68.90	566.04	32.37	517.0	671.31	3418.6
MEAN	6.86	1.94	2.64	24.8	4.31	14.2	2.30	18.3	1.08	16.7	21.7	114
MAX	38	7.1	9.0	329	10	58	24	264	7.3	82	79	857
MIN	.08	.08	1.1	1.0	2.2	1.8	.43	.29	.11	2.7	.34	5.6

CAL YR 1988 TOTAL 5746.09 MEAN 15.7 MAX 728 MIN .01
WTR YR 1989 TOTAL 6957.90 MEAN 19.1 MAX 857 MIN .08

ST. JOHNS RIVER BASIN ABOVE OKLAWAHA RIVER

02232400 ST. JOHNS RIVER NEAR COCOA, FL

LOCATION.--Lat 28°22'10", long 80°52'22", in SE¼ sec.25, T.24 S., R.34 E., Brevard County, Hydrologic Unit 03080101, near right bank on downstream side of bridge on State Highway 520, 0.6 mi upstream from Taylor Creek, 0.7 mi downstream from outlet of Lake Poinsett, 8.8 mi west of Cocoa, and 232 mi upstream from mouth.

DRAINAGE AREA.--1,331 mi^2.

PERIOD OF RECORD.--October 1953 to current year.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1959, nonrecording gage at site 3.7 mi east on north shore of Lake Poinsett at datum 5.06 ft higher.

REMARKS.--Estimated daily discharges: July 5-21. Records fair. Records include inflow from Taylor Creek. Gage heights are published as elevations for Lake Poinsett (station 02232300) in the section of this report entitled LAKE ELEVATIONS.

AVERAGE DISCHARGE.--36 years, 965 ft^3/s, 9.85 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 10,700 ft^3/s, Oct. 11, 1953; maximum gage height observed, 16.96 ft, present site and datum, Oct. 11, 1953; minimum daily discharge, 5.6 ft^3/s, July 17, 1981; minimum gage height, 7.77 ft, Mar. 6, 1962, affected by wind.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 480 ft^3/s, Feb. 5, gage height, 12.16 ft; maximum gage height, 12.65 ft, Oct. 3; minimum daily discharge, 44 ft^3/s, June 28; minimum gage height, 10.41 ft, Jan. 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	315	206	167	136	456	312	338	189	90	57	59	120
2	317	202	159	132	465	313	349	180	86	57	56	123
3	350	204	157	125	465	332	346	179	82	57	55	122
4	350	215	158	121	464	343	347	180	79	54	55	117
5	344	216	154	124	469	347	335	177	75	53	55	112
6	330	215	157	124	468	348	321	165	71	52	52	115
7	318	212	160	123	460	334	309	152	69	51	51	114
8	318	210	157	122	448	326	309	153	70	50	50	112
9	323	206	156	119	415	316	305	154	73	49	50	115
10	319	199	153	113	412	321	294	142	70	49	55	119
11	316	198	155	112	418	358	269	135	68	48	66	121
12	307	193	155	115	416	383	255	131	66	48	70	124
13	296	191	150	110	427	393	254	132	64	49	84	127
14	293	184	160	112	425	402	254	127	62	52	94	135
15	288	182	161	109	417	409	250	123	61	54	100	137
16	285	184	159	105	407	407	249	119	60	58	102	141
17	282	178	149	101	401	404	247	115	55	64	104	143
18	282	177	150	100	377	403	232	111	52	68	104	158
19	281	176	153	101	369	391	226	105	49	71	106	173
20	277	171	155	100	375	399	224	100	48	74	116	180
21	270	162	152	100	374	394	216	98	47	74	114	178
22	263	168	151	159	362	394	213	110	46	75	115	196
23	259	176	151	228	324	393	213	109	46	75	116	205
24	254	174	149	299	316	378	209	109	47	74	118	221
25	244	183	147	347	324	370	202	110	48	70	117	237
26	242	193	144	381	322	371	192	110	46	67	121	256
27	241	189	146	399	322	380	186	108	45	66	124	271
28	233	178	143	417	313	375	178	103	44	64	124	281
29	227	173	140	433	---	369	178	101	48	62	122	292
30	217	173	138	440	---	363	186	100	56	62	120	299
31	217	---	138	451	---	351	---	95	---	61	122	---
TOTAL	8860	5688	4724	5958	11211	11379	7686	4022	1823	1865	2797	5044
MEAN	286	190	152	192	400	367	256	130	60.8	60.2	90.2	168
MAX	350	216	167	451	469	409	349	189	90	75	124	299
MIN	217	162	138	100	313	312	178	95	44	48	50	112
CFSM	.21	.14	.11	.14	.30	.28	.19	.10	.05	.05	.07	.13
IN.	.25	.16	.13	.17	.31	.32	.21	.11	.05	.05	.08	.14

CAL YR 1988 TOTAL 240137 MEAN 656 MAX 2660 MIN 136 CFSM .49 IN. 6.71
WTR YR 1989 TOTAL 71057 MEAN 195 MAX 469 MIN 44 CFSM .15 IN. 1.99

ST. JOHNS RIVER

ST. JOHNS RIVER BASIN ABOVE OKLAWAHA RIVER

02232500 ST. JOHNS RIVER NEAR CHRISTMAS, FL

LOCATION.--Lat 28°32'34", long 80°56'37", in SW¼ sec.29, T.22 S., R.34 E., Orange County, Hydrologic Unit 03080101, on downstream side of bridge on State Highway 50, 0.3 mi upstream from Tootoosahatchee Creek, 2 mi upstream from Lake Cone, 4.5 mi east of Christmas, and 209 mi upstream from mouth.

DRAINAGE AREA.--1,539 mi^2, includes that of Tootoosahatchee Creek.

PERIOD OF RECORD.--October 1933 to current year. Prior to January 1934, monthly discharge only, published in WSP 1304.

GAGE.--Water-stage recorder. Datum of gage is 1.62 ft above National Geodetic Vertical Datum of 1929. Prior to July 23, 1934, nonrecording gage at same site and datum.

REMARKS.--Records fair.

AVERAGE DISCHARGE.--56 years, 1,276 ft^3/s, 11.26 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,700 ft^3/s, Oct. 12, 1953, gage height, 10.59 ft; maximum gage height, 10.81 ft, Sept. 28, 1960; no flow Mar. 22-27, Apr. 19, June 12,13, 1939; minimum gage height, 0.48 ft, June 19, 1945.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,510 ft^3/s, Jan. 25, gage height, 6.22 ft; minimum, 69 ft^3/s, June 18,21, gage height, 2.20 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	557	288	630	197	840	308	282	179	105	131	201	433
2	541	279	580	191	792	312	278	180	101	143	197	398
3	600	270	537	186	744	325	271	182	97	148	203	368
4	739	272	494	181	705	333	266	181	93	150	215	339
5	844	269	452	176	668	335	262	176	90	148	225	315
6	989	271	420	169	635	332	260	171	88	143	230	298
7	1020	269	393	164	608	332	255	166	92	136	229	282
8	982	266	371	159	583	343	250	162	93	130	224	267
9	920	261	351	156	556	348	244	157	91	123	225	261
10	849	256	333	153	537	352	237	149	89	117	223	256
11	782	251	325	150	514	352	231	148	90	113	231	247
12	729	246	346	147	490	343	227	145	89	114	242	242
13	682	240	346	142	473	336	223	145	86	122	280	240
14	662	234	342	140	454	335	218	143	84	135	322	243
15	629	229	332	136	438	336	217	149	81	149	358	233
16	602	223	323	134	425	337	221	148	77	155	383	225
17	577	217	312	132	415	339	218	144	72	156	406	235
18	547	213	303	129	403	339	213	140	71	161	416	293
19	515	209	293	125	395	337	208	135	75	172	433	330
20	486	203	282	122	388	335	205	130	72	213	478	338
21	457	198	271	136	376	328	201	124	70	266	571	329
22	430	198	263	445	365	325	199	121	72	306	680	320
23	409	409	256	993	352	322	197	122	78	324	732	332
24	391	664	249	1400	346	318	193	120	93	323	742	372
25	375	826	242	1490	339	315	188	119	101	314	723	377
26	361	870	234	1410	327	312	183	118	99	297	696	377
27	346	830	228	1270	319	307	179	115	94	277	655	370
28	332	770	219	1160	311	302	174	114	89	256	607	360
29	319	725	213	1060	---	296	171	114	90	236	563	350
30	307	680	208	970	---	290	175	112	110	222	520	340
31	298	---	203	899	---	285	---	108	---	210	477	---
TOTAL	18277	11136	10351	14322	13798	10109	6646	4417	2632	5890	12687	9370
MEAN	590	371	334	462	493	326	222	142	87.7	190	409	312
MAX	1020	870	630	1490	840	352	282	182	110	324	742	433
MIN	298	198	203	122	311	285	171	108	70	113	197	225
CFSM	.38	.24	.22	.30	.32	.21	.14	.09	.06	.12	.27	.20
IN.	.44	.27	.25	.35	.33	.24	.16	.11	.06	.14	.31	.23

CAL YR 1988 TOTAL 316495 MEAN 865 MAX 3100 MIN 146 CFSM .56 IN. 7.65
WTR YR 1989 TOTAL 119635 MEAN 328 MAX 1490 MIN 70 CFSM .21 IN. 2.89

ST. JOHNS RIVER

ST. JOHNS RIVER BASIN ABOVE OKLAWAHA RIVER

02232500 ST. JOHNS RIVER NEAR CHRISTMAS, FL--Continued

GAGE HEIGHT, IN FEET ABOVE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.93	3.98	5.10	3.39	5.43	4.10	3.95	3.25	2.60	2.85	3.41	4.63
2	4.91	3.93	4.99	3.35	5.36	4.12	3.93	3.26	2.56	2.95	3.38	4.52
3	5.03	3.88	4.90	3.30	5.29	4.19	3.89	3.28	2.52	2.99	3.43	4.39
4	5.32	3.89	4.79	3.26	5.23	4.23	3.85	3.26	2.48	3.01	3.52	4.26
5	5.48	3.88	4.69	3.22	5.17	4.24	3.83	3.23	2.44	2.99	3.60	4.14
6	5.67	3.88	4.59	3.17	5.11	4.22	3.82	3.18	2.42	2.96	3.63	4.04
7	5.72	3.88	4.50	3.13	5.06	4.22	3.79	3.14	2.47	2.89	3.62	3.95
8	5.67	3.86	4.40	3.09	5.00	4.27	3.76	3.11	2.48	2.84	3.58	3.86
9	5.59	3.83	4.31	3.07	4.94	4.30	3.72	3.07	2.45	2.77	3.59	3.83
10	5.49	3.80	4.23	3.04	4.90	4.31	3.68	3.01	2.43	2.72	3.58	3.79
11	5.39	3.76	4.19	3.01	4.84	4.31	3.63	2.99	2.44	2.68	3.63	3.74
12	5.30	3.73	4.29	2.98	4.78	4.27	3.60	2.97	2.43	2.69	3.71	3.71
13	5.21	3.70	4.29	2.95	4.74	4.25	3.58	2.97	2.40	2.76	3.94	3.70
14	5.17	3.66	4.27	2.93	4.69	4.24	3.54	2.95	2.37	2.88	4.17	3.71
15	5.10	3.62	4.22	2.89	4.65	4.24	3.54	3.00	2.34	3.01	4.34	3.65
16	5.04	3.58	4.18	2.87	4.61	4.25	3.56	2.99	2.29	3.05	4.45	3.59
17	4.99	3.53	4.12	2.85	4.58	4.26	3.54	2.96	2.24	3.07	4.55	3.65
18	4.92	3.50	4.07	2.82	4.54	4.26	3.50	2.93	2.23	3.11	4.58	4.01
19	4.84	3.48	4.01	2.79	4.51	4.25	3.47	2.88	2.27	3.19	4.63	4.22
20	4.77	3.43	3.95	2.76	4.48	4.24	3.45	2.84	2.24	3.51	4.75	4.25
21	4.70	3.40	3.89	2.88	4.42	4.21	3.42	2.79	2.21	3.86	4.97	4.21
22	4.62	3.39	3.84	4.49	4.38	4.19	3.40	2.76	2.23	4.09	5.19	4.16
23	4.56	4.47	3.80	5.67	4.32	4.17	3.39	2.76	2.30	4.18	5.27	4.22
24	4.49	5.17	3.75	6.12	4.29	4.15	3.36	2.74	2.48	4.18	5.28	4.41
25	4.42	5.46	3.70	6.20	4.26	4.14	3.32	2.73	2.56	4.13	5.26	4.43
26	4.35	5.52	3.66	6.12	4.20	4.12	3.28	2.72	2.53	4.04	5.21	4.43
27	4.29	5.47	3.61	5.98	4.16	4.09	3.25	2.70	2.48	3.92	5.14	4.40
28	4.22	5.37	3.55	5.85	4.11	4.06	3.21	2.69	2.43	3.80	5.05	4.35
29	4.16	5.29	3.51	5.74	---	4.03	3.19	2.69	2.44	3.67	4.96	4.31
30	4.09	5.20	3.47	5.62	---	4.00	3.22	2.66	2.65	3.57	4.86	4.26
31	4.04	---	3.43	5.52	---	3.97	---	2.63	---	3.49	4.75	---
MEAN	4.92	4.12	4.14	3.91	4.72	4.19	3.56	2.94	2.41	3.29	4.32	4.09
MAX	5.72	5.52	5.10	6.20	5.43	4.31	3.95	3.28	2.65	4.18	5.28	4.63
MIN	4.04	3.39	3.43	2.76	4.11	3.97	3.19	2.63	2.21	2.68	3.38	3.59

WTR YR 1989 MEAN 3.88 MAX 6.20 MIN 2.21

02233001 ECONLOCKHATCHEE RIVER AT MAGNOLIA RANCH, NEAR BITHLO, FL

LOCATION.--Lat 28°25'27", long 81°07'10", in SE¼ sec.4, T.24 S., R.32 E., Orange County, Hydrologic Unit 03080101, near center of span on downstream side of bridge on Wewahootee Road, 250 ft downstream from Disston Canal, and 7 mi south of Bithlo.

DRAINAGE AREA.--32.9 mi^2.

PERIOD OF RECORD.--1960, 1964-67 (one discharge measurement each year), October 1972 to current year.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: July 2-19. Records fair except for estimated daily discharges, which are poor.

AVERAGE DISCHARGE.--17 years, 24.9 ft^3/s, 10.28 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 474 ft^3/s June 21,22, 1982, gage height, 62.58 ft; maximum gage height 63.42 ft, Mar. 31, 1987; no flow for many days in most years; river dry at gage for many days in most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 217 ft^3/s, Aug. 22, gage height, 62.52 ft; no flow many days; river dry at gage many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21	3.4	43	9.1	50	4.6	.48	.00	.00	.16	5.6	124
2	19	3.0	39	8.5	46	4.9	.32	.00	.00	.29	8.4	116
3	30	2.7	34	8.1	41	6.7	.22	.00	.00	.00	11	110
4	75	4.9	31	7.5	38	8.5	.59	.00	.00	.00	26	104
5	86	8.0	28	6.8	35	8.2	3.5	.00	.00	2.5	33	99
6	74	12	26	6.2	32	7.4	3.5	.00	.00	1.3	29	98
7	63	13	24	5.7	29	7.6	2.2	.00	.00	.74	22	94
8	55	12	23	5.3	27	10	1.3	.00	.00	.46	17	89
9	48	11	21	4.9	24	11	.83	.00	.00	.30	13	85
10	43	9.4	20	4.5	22	11	.53	.00	.00	.18	13	80
11	38	8.3	20	4.3	20	10	.35	.00	.00	.10	33	76
12	33	7.4	27	4.0	19	9.1	.26	.00	.00	.06	53	72
13	29	6.7	29	3.7	18	8.3	.19	.00	.00	.12	65	68
14	25	6.1	28	3.5	17	7.4	.14	.00	.00	.24	81	65
15	22	5.5	26	3.2	16	6.5	.54	.00	.00	.44	95	61
16	20	5.0	24	3.0	15	5.7	1.5	.00	.00	1.1	103	57
17	18	4.6	23	2.8	14	5.0	1.1	.00	.00	2.2	106	52
18	16	4.3	21	2.6	13	4.2	.73	.00	.00	4.0	113	49
19	15	3.9	19	2.3	12	3.6	.48	.00	.00	2.9	150	50
20	13	3.6	18	2.2	11	3.1	.32	.00	.00	2.2	169	50
21	12	3.3	17	4.4	10	2.7	.24	.00	.00	3.4	192	47
22	11	3.5	16	70	9.7	2.3	.20	.00	.00	4.0	212	43
23	9.5	60	16	106	9.0	2.1	.14	.00	.00	3.9	210	41
24	8.4	88	15	98	7.8	2.2	.07	.00	.00	3.1	205	42
25	7.5	82	14	89	6.9	2.2	.01	.00	.00	2.4	202	43
26	6.4	72	13	83	6.2	2.0	.00	.00	.00	1.5	199	45
27	5.6	64	12	78	5.5	1.7	.00	.00	.00	.98	187	44
28	4.9	59	12	72	5.1	1.3	.00	.00	.00	.75	172	42
29	4.3	53	11	67	---	.98	.00	.00	.00	.40	159	39
30	3.8	48	10	61	---	.80	.00	.00	.00	.22	147	37
31	3.6	---	9.8	56	---	.63	---	.00	---	.73	135	---
TOTAL	820.0	667.6	669.8	882.6	559.2	161.71	19.74	0.00	0.00	40.67	3166.0	2022
MEAN	26.5	22.3	21.6	28.5	20.0	5.22	.66	.00	.00	1.31	102	67.4
MAX	86	88	43	106	50	11	3.5	.00	.00	4.0	212	124
MIN	3.6	2.7	9.8	2.2	5.1	.63	.00	.00	.00	.00	5.6	37
CFSM	.80	.68	.66	.87	.61	.16	.02	.00	.00	.04	3.10	2.05
IN.	.93	.75	.76	1.00	.63	.18	.02	.00	.00	.05	3.58	2.29

CAL YR 1988 TOTAL 9080.23 MEAN 24.8 MAX 129 MIN .00 CFSM .75 IN. 10.27
WTR YR 1989 TOTAL 9009.32 MEAN 24.7 MAX 212 MIN .00 CFSM .75 IN. 10.19

ST. JOHNS RIVER BASIN ABOVE OKLAWAHA RIVER

02233102 ECONLOCKHATCHEE RIVER TRIBUTARY NEAR BITHLO, FL

LOCATION.--Lat 28°33'55", long 81°11'19", in NW¼ sec.23, T.22 S., R.31 E., Orange County, Hydrologic Unit 03080101, on right bank 15 ft upstream from culvert on State Highway 50, 3.5 mi east of Union Park, 5.1 mi west of Bithlo, and 2.5 mi upstream from mouth.

DRAINAGE AREA.--1.83 mi^2.

PERIOD OF RECORD.--Annual maximum, water years 1969-82. January 1983 to January 1989 (discontinued).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 51.35 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair.

AVERAGE DISCHARGE.--5 years (water years 1984-88); 2.82 ft^3/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 338 ft^3/s, Sept. 22, 1969, gage height, 4.83 ft, from rating curve extended above 120 ft^3/s; minimum daily discharge, 0.01 ft^3/s, May 18,19, 1985, minimum gage height, 2.11 ft, part or all of each day May 30 to June 7, June 9, 1986.

EXTREMES FOR CURRENT YEAR.--Maximum discharge during period October 1988 to January 1989, 182 ft^3/s, Nov. 23, gage height, 4.58 ft; minimum daily, 0.37 ft^3/s, Oct. 31, Nov. 1,2; minimum gage height, 2.20 ft, Nov. 15,16.

DISCHARGE, IN CUBIC FEET PER SECOND, PERIOD OCTOBER 1988 TO JANUARY 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.87	.37	2.5	1.5	---	---	---	---	---	---	---	---
2	.77	.37	2.3	1.5	---	---	---	---	---	---	---	---
3	1.1	.41	2.2	1.5	---	---	---	---	---	---	---	---
4	3.4	.83	2.0	1.5	---	---	---	---	---	---	---	---
5	3.1	2.3	2.0	1.5	---	---	---	---	---	---	---	---
6	2.1	4.0	2.0	1.3	---	---	---	---	---	---	---	---
7	1.5	2.5	1.9	1.3	---	---	---	---	---	---	---	---
8	1.1	1.6	1.8	1.3	---	---	---	---	---	---	---	---
9	.90	1.1	1.8	1.3	---	---	---	---	---	---	---	---
10	.85	.89	1.8	1.4	---	---	---	---	---	---	---	---
11	.76	.77	3.0	1.5	---	---	---	---	---	---	---	---
12	.67	.67	3.1	1.5	---	---	---	---	---	---	---	---
13	.67	.66	2.9	1.5	---	---	---	---	---	---	---	---
14	.58	.58	2.6	1.4	---	---	---	---	---	---	---	---
15	.58	.50	2.4	1.3	---	---	---	---	---	---	---	---
16	.51	.55	2.3	1.3	---	---	---	---	---	---	---	---
17	.55	.53	2.1	1.3	---	---	---	---	---	---	---	---
18	.58	.54	2.0	1.3	---	---	---	---	---	---	---	---
19	.51	.51	1.9	1.3	---	---	---	---	---	---	---	---
20	.51	.51	1.8	1.3	---	---	---	---	---	---	---	---
21	.51	.55	1.8	3.2	---	---	---	---	---	---	---	---
22	.53	1.1	1.8	37	---	---	---	---	---	---	---	---
23	.46	81	1.8	23	---	---	---	---	---	---	---	---
24	.44	26	1.8	13	---	---	---	---	---	---	---	---
25	.44	13	1.8	7.2	---	---	---	---	---	---	---	---
26	.44	7.4	1.8	3.3	---	---	---	---	---	---	---	---
27	.44	3.7	1.8	2.6	---	---	---	---	---	---	---	---
28	.44	5.2	1.6	2.3	---	---	---	---	---	---	---	---
29	.44	3.2	1.5	2.1	---	---	---	---	---	---	---	---
30	.43	2.6	1.5	2.0	---	---	---	---	---	---	---	---
31	.37	---	1.5	2.0	---	---	---	---	---	---	---	---
TOTAL	26.55	163.94	63.1	125.5	---	---	---	---	---	---	---	---
MEAN	.86	5.46	2.04	4.05	---	---	---	---	---	---	---	---
MAX	3.4	81	3.1	37	---	---	---	---	---	---	---	---
MIN	.37	.37	1.5	1.3	---	---	---	---	---	---	---	---

CAL YR 1988 TOTAL 1249.60 MEAN 3.41 MAX 81 MIN .15

ST. JOHNS RIVER BASIN ABOVE OKLAWAHA RIVER

02233200 LITTLE ECONLOCKHATCHEE RIVER NEAR UNION PARK, FL

LOCATION.--Lat 28°31'29", long 81°14'39", in SW¼ sec.32, T.22 S., R.31 E., Orange County, Hydrologic Unit 03080101, near right bank at Berry-Deese Road, 3,300 ft upstream from a tributary, 3 mi south of Union Park, 8.5 mi east of Orlando, and 13 mi upstream from mouth.

DRAINAGE AREA.--27.1 mi^2.

PERIOD OF RECORD.--October 1959 to current year.

GAGE.--Water-stage recorder. Datum of gage is 56.19 ft above National Geodetic Vertical Datum of 1929. Prior to Jan 12, 1960, and Oct. 21, 1972 to Nov. 14, 1983, nonrecording gage at same site and datum.

REMARKS.--Records fair.

AVERAGE DISCHARGE.--30 years, 25.8 ft^3/s, 12.93 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,640 ft^3/s, Mar. 17, 1960, gage height, 11.64 ft; minimum discharge, 0.10 ft^3/s, June 6,7, 1961; minimum gage height, 4.83 ft, May 14, 1967, May 6, 1971.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 200 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 23	1200	*625	*9.57	Sept. 2	0500	211	6.10
Jan. 22	1400	401	8.95				

Minimum discharge, 3.7 ft^3/s, May 9, June 5,6, gage height, 5.16 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	31	13	56	18	49	13	9.6	17	8.1	7.7	12	20
2	28	14	48	17	45	16	8.7	13	6.3	10	12	155
3	34	14	43	17	42	19	8.6	9.4	5.1	15	12	71
4	78	29	39	17	40	18	8.4	8.1	4.4	11	15	47
5	57	27	36	16	36	16	8.4	7.5	3.9	8.0	12	34
6	46	30	33	16	34	16	9.4	6.5	4.7	5.9	9.9	51
7	40	21	30	16	31	15	9.4	5.8	20	11	9.0	59
8	35	19	28	16	29	17	9.3	5.0	77	9.6	10	38
9	33	18	26	16	26	16	8.4	4.7	55	7.9	11	37
10	30	16	25	15	24	15	8.1	4.6	26	6.6	15	33
11	28	16	29	15	22	14	8.2	4.9	18	7.7	92	28
12	26	16	71	15	20	14	7.7	5.3	14	26	38	24
13	24	16	49	15	19	13	6.9	4.5	12	35	44	25
14	21	14	39	14	19	12	6.7	4.6	10	27	34	26
15	21	13	35	14	17	12	11	20	9.1	17	24	24
16	22	13	31	14	17	12	15	9.4	8.2	13	19	20
17	20	13	29	14	17	12	11	6.8	7.8	13	16	54
18	21	15	27	13	16	12	9.3	5.8	8.7	16	14	33
19	19	14	24	13	16	11	8.1	5.1	13	37	14	38
20	19	13	22	13	16	11	7.7	4.7	11	56	18	31
21	18	13	22	18	15	11	7.6	4.3	11	34	37	27
22	17	14	21	270	15	11	7.7	4.5	11	26	23	23
23	17	417	21	228	14	11	6.9	9.6	9.9	25	19	23
24	16	282	21	139	14	11	6.5	6.4	11	21	16	27
25	16	152	20	106	13	11	6.0	5.0	15	20	16	40
26	15	107	19	89	13	10	5.7	4.6	11	17	40	39
27	15	86	19	79	13	10	5.6	4.1	8.9	15	46	36
28	14	85	19	70	13	9.9	5.3	3.9	7.8	14	34	33
29	14	77	19	63	---	10	5.4	9.6	8.3	13	26	29
30	13	62	18	57	---	9.9	13	7.0	8.0	12	22	26
31	13	---	18	53	---	9.7	---	11	---	12	20	---
TOTAL	801	1639	937	1476	645	398.5	250.6	222.7	424.2	549.4	729.9	1151
MEAN	25.8	54.6	30.2	47.6	23.0	12.9	8.35	7.18	14.1	17.7	23.5	38.4
MAX	78	417	71	270	49	19	16	20	77	56	92	155
MIN	13	13	18	13	13	9.7	5.3	3.9	3.9	5.9	9.0	20
CFSM	.95	2.02	1.12	1.76	.85	.47	.31	.27	.52	.65	.87	1.42
IN.	1.10	2.25	1.29	2.03	.89	.55	.34	.31	.58	.75	1.00	1.58

CAL YR 1988 TOTAL 13692.6 MEAN 37.4 MAX 417 MIN 8.0 CFSM 1.38 IN. 18.80
WTR YR 1989 TOTAL 9224.3 MEAN 25.3 MAX 417 MIN 3.9 CFSM .93 IN. 12.66

ST. JOHNS RIVER BASIN ABOVE OKLAWAHA RIVER

02233500 ECONLOCKHATCHEE RIVER NEAR CHULUOTA, FL

LOCATION.--Lat 28°40'40", long 81°06'51", in SW¼ sec.10, T.21 S., R.32 E., Seminole County, Hydrologic Unit 03080101, near right bank on downstream side of bridge on State Highway 13, 2.6 mi northeast of Chuluota, and 10 mi upstream from mouth.

DRAINAGE AREA.--241 mi^2.

PERIOD OF RECORD.--October 1935 to current year. Monthly discharge only for October 1935, published in WSP 1304.

GAGE.--Water-stage recorder. Datum of gage is 2.14 ft above National Geodetic Vertical Datum of 1929 (U.S. Army Corps of Engineers bench mark). Nov. 6, 1935, to May 17, 1939, and June 17, 1969, to July 21, 1971, nonrecording gage at same site and datum. Since Sept. 3, 1943, water-stage recorder for St. Johns River above Lake Harney near Geneva (station 02234000) used as auxiliary gage for this station.

REMARKS.--Records fair. Records include some flow diverted from Lake Mary Jane in the Kissimmee River Basin through Disston Canal.

AVERAGE DISCHARGE.--54 years, 266 ft^3/s, 14.99 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,000 ft^3/s, Mar. 18, 1960, gage height, 18.69 ft; minimum daily, 6.7 ft^3/s, June 11-13,15, 1945; minimum gage height, 0.08 ft, May 10, 1968.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,350 ft^3/s, Nov. 25, gage height, 11.88 ft; minimum, 33 ft^3/s, May 10, gage height, 0.21 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	301	81	638	122	445	80	53	39	63	92	88	348
2	274	80	550	117	394	104	52	52	54	97	115	384
3	263	77	479	112	357	124	48	55	46	93	173	457
4	324	83	425	112	324	139	47	48	42	98	272	505
5	511	115	376	105	295	135	48	42	38	90	380	472
6	726	162	333	99	265	118	50	41	37	80	436	458
7	754	190	299	95	241	108	50	39	38	76	381	356
8	633	164	273	91	222	106	48	37	58	74	280	311
9	507	132	254	89	205	114	45	35	105	71	203	305
10	417	116	231	88	189	114	44	34	150	67	158	311
11	359	106	214	87	167	106	43	36	145	63	200	311
12	311	99	266	85	153	101	43	36	112	59	366	290
13	266	92	370	84	142	98	42	35	93	75	515	255
14	234	87	400	82	137	93	39	34	84	109	690	220
15	205	84	377	80	128	87	43	37	76	113	739	197
16	178	80	336	78	123	84	56	40	69	101	726	181
17	173	77	302	77	120	80	67	45	63	112	687	173
18	167	75	274	76	114	77	58	39	60	123	562	204
19	147	74	242	75	108	73	51	36	62	179	447	209
20	137	151	220	73	101	70	48	34	61	302	455	188
21	129	290	200	80	97	67	45	35	62	293	612	173
22	121	292	184	375	95	65	46	43	72	271	710	160
23	110	454	174	760	94	62	47	50	84	239	721	155
24	104	1080	169	1500	94	62	44	55	86	186	706	162
25	100	2120	165	1760	92	61	42	47	85	158	678	201
26	97	2110	154	1420	86	60	39	42	90	151	626	250
27	92	1550	143	1120	82	57	39	39	83	133	568	258
28	87	1200	138	865	81	56	48	36	72	112	551	244
29	86	948	133	678	---	54	46	39	68	98	531	226
30	83	757	129	576	---	52	39	67	82	90	470	201
31	79	---	126	506	---	51	---	72	---	88	405	---
TOTAL	7975	12926	8574	11467	4951	2658	1410	1319	2240	3893	14451	8165
MEAN	257	431	277	370	177	85.7	47.0	42.5	74.7	126	466	272
MAX	754	2120	638	1760	445	139	67	72	150	302	739	505
MIN	79	74	126	73	81	51	39	34	37	59	88	155
CFSM	1.07	1.79	1.15	1.53	.73	.36	.20	.18	.31	.52	1.93	1.13
IN.	1.23	2.00	1.32	1.77	.76	.41	.22	.20	.35	.60	2.23	1.26

CAL YR 1988 TOTAL 121554 MEAN 332 MAX 2410 MIN 42 CFSM 1.38 IN. 18.76
WTR YR 1989 TOTAL 80029 MEAN 219 MAX 2120 MIN 34 CFSM .91 IN. 12.35

ST. JOHNS RIVER

ST. JOHNS RIVER BASIN ABOVE OKLAWAHA RIVER

02234000 ST. JOHNS RIVER ABOVE LAKE HARNEY, NEAR GENEVA, FL

LOCATION.--Lat 28°42'50", long 81°02'08", in NE¼ sec.32, T.20 S., R.33 E., Seminole County, Hydrologic Unit 03080101, near left bank on downstream side of bridge on State Highway 46, 0.9 mi downstream from Econlockhatchee River, 1 mi upstream from Lake Harney, 5.5 mi southeast of Geneva, and 190 mi upstream from mouth.

DRAINAGE AREA.--2,043 mi^2.

PERIOD OF RECORD.--July 1941 to September 1981 (gage heights and miscellaneous discharge measurements only). October 1981 to current year. Records of gage heights prior to October 1962 are unpublished and available in files of the Orlando Subdistrict office.

REVISED RECORDS.--WRD FL 1966: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (U.S. Army Corps of Engineers bench mark). Prior to Sept. 3, 1943, nonrecording gage, and Sept. 3, 1943 to Oct. 8, 1959, water-stage recorder at site 50 ft downstream at same datum.

REMARKS.--Records fair except those below 200 ft^3/s, which are poor.

AVERAGE DISCHARGE.--8 years, 1,688 ft^3/s, 11.23 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge measured, 13,800 ft^3/s, Oct. 7, 1953, gage height, 10.05 ft; maximum gage height, 10.62 ft, Oct. 13, 1953; minimum discharge measured, 70 ft^3/s, Nov. 6, 1980, gage height, 0.88 ft; minimum gage height, -0.42 ft, June 18, 1945.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in October 1924 reached a stage of 10.1 ft, from floodmark.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,560 ft^3/s, Nov. 28,29; maximum gage height, 4.26 ft, Nov. 28; minimum discharge, 126 ft^3/s, June 18,20; minimum gage height, 0.03 ft, June 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1530	933	3380	772	2740	652	453	236	233	254	258	1000
2	1480	926	3260	729	2640	801	390	245	251	283	249	1010
3	1540	911	3120	691	2530	829	344	239	244	317	261	1000
4	1650	943	2980	684	2400	824	307	219	224	370	291	994
5	1720	977	2830	635	2280	798	286	197	205	404	325	989
6	1820	997	2680	582	2150	770	282	195	191	410	363	979
7	1920	969	2530	551	2020	760	274	212	184	417	384	936
8	1960	920	2380	515	1890	773	275	209	184	386	369	908
9	1960	866	2240	479	1750	803	249	196	191	346	337	949
10	1950	804	2100	459	1630	875	226	195	202	303	323	974
11	1930	749	1990	438	1540	917	219	215	200	261	344	969
12	1900	696	1930	436	1440	951	220	201	184	229	416	948
13	1870	647	1890	456	1360	976	246	186	182	205	549	921
14	1810	611	1860	465	1270	978	279	168	180	195	669	903
15	1760	580	1810	464	1190	952	347	183	171	189	751	864
16	1710	558	1770	470	1100	926	400	e170	156	185	804	832
17	1670	536	1720	462	1020	883	387	e165	139	179	828	838
18	1620	520	1660	441	946	841	374	e160	130	199	843	874
19	1560	500	1590	415	886	795	357	e155	130	246	843	875
20	1510	488	1510	389	835	744	340	e150	128	270	828	868
21	1440	490	1440	422	800	690	342	e165	136	295	890	875
22	1390	515	1370	863	787	649	354	e180	154	301	969	894
23	1330	1290	1300	1530	813	601	365	193	170	284	1020	914
24	1270	2000	1240	2040	847	583	371	208	195	269	1060	950
25	1230	2570	1170	2470	818	573	357	206	199	266	1080	1020
26	1170	3070	1100	2810	767	569	343	192	194	276	1100	1080
27	1120	3380	1040	2960	719	553	327	176	190	287	1100	1130
28	1070	3510	976	3010	669	535	305	160	189	287	1090	1160
29	1030	3520	923	3010	---	506	275	154	202	286	1080	1150
30	989	3500	873	2910	---	471	247	170	221	278	1070	1140
31	958	---	819	2830	---	459	---	202	---	267	1040	---
TOTAL	47867	38976	57481	35388	39837	23037	9541	5902	5559	8744	21534	28944
MEAN	1544	1299	1854	1142	1423	743	318	190	185	282	695	965
MAX	1960	3520	3380	3010	2740	978	453	245	251	417	1100	1160
MIN	958	488	819	389	669	459	219	150	128	179	249	832
CFSM	.76	.64	.91	.56	.70	.36	.16	.09	.09	.14	.34	.47
IN.	.87	.71	1.05	.64	.73	.42	.17	.11	.10	.16	.39	.53

CAL YR 1988 TOTAL 593850 MEAN 1623 MAX 4170 MIN 334 CFSM .79 IN. 10.81
WTR YR 1989 TOTAL 322810 MEAN 884 MAX 3520 MIN 128 CFSM .43 IN. 5.88

e Estimated

ST. JOHNS RIVER

ST. JOHNS RIVER BASIN ABOVE OKLAWAHA RIVER

02234000 ST. JOHNS RIVER ABOVE LAKE HARNEY, NEAR GENEVA, FL--Continued

GAGE HEIGHT, IN FEET ABOVE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.90	1.91	4.09	1.52	4.02	1.56	1.07	.61	.52	.56	.76	2.06
2	2.82	1.89	3.99	1.46	3.92	1.77	.95	.64	.56	.64	.74	2.07
3	2.86	1.87	3.88	1.41	3.82	1.81	.86	.62	.53	.74	.77	2.06
4	2.95	1.91	3.77	1.40	3.69	1.80	.78	.57	.47	.87	.84	2.05
5	3.01	1.95	3.64	1.33	3.58	1.76	.73	.51	.41	.95	.92	2.04
6	3.09	1.97	3.52	1.25	3.45	1.71	.72	.51	.36	.98	1.00	2.03
7	3.17	1.93	3.39	1.20	3.32	1.69	.70	.55	.33	1.01	1.04	1.98
8	3.21	1.86	3.25	1.14	3.18	1.70	.71	.54	.33	.96	1.02	1.94
9	3.20	1.78	3.12	1.08	3.04	1.74	.65	.51	.33	.89	.96	2.00
10	3.19	1.69	2.99	1.04	2.91	1.84	.59	.50	.35	.81	.93	2.03
11	3.16	1.60	2.89	1.01	2.80	1.89	.57	.56	.34	.72	.97	2.03
12	3.13	1.52	2.84	1.01	2.68	1.93	.57	.52	.29	.66	1.11	2.00
13	3.09	1.44	2.79	1.04	2.58	1.96	.64	.48	.27	.59	1.35	1.97
14	3.03	1.38	2.77	1.07	2.46	1.96	.72	.43	.26	.56	1.55	1.95
15	2.96	1.33	2.73	1.07	2.36	1.92	.86	---	.22	.55	1.68	1.89
16	2.91	1.28	2.68	1.08	2.25	1.88	.97	---	.17	.54	1.76	1.84
17	2.86	1.24	2.64	1.08	2.14	1.82	.95	---	.10	.53	1.79	1.84
18	2.80	1.20	2.57	1.04	2.04	1.75	.92	---	.06	.58	1.81	1.89
19	2.74	1.17	2.50	.99	1.95	1.68	.89	---	.05	.71	1.81	1.88
20	2.67	1.14	2.42	.95	1.87	1.60	.85	---	.03	.76	1.80	1.86
21	2.60	1.13	2.34	1.02	1.81	1.52	.86	---	.06	.82	1.89	1.87
22	2.53	1.16	2.27	1.75	1.79	1.45	.88	---	.11	.84	2.00	1.89
23	2.45	2.21	2.19	2.62	1.82	1.37	.91	---	.18	.81	2.07	1.91
24	2.37	2.97	2.11	3.19	1.87	1.34	.92	.53	.27	.77	2.11	1.95
25	2.32	3.49	2.03	3.62	1.82	1.32	.89	.52	.30	.77	2.14	2.04
26	2.24	3.89	1.95	3.96	1.74	1.30	.86	.47	.30	.79	2.18	2.12
27	2.17	4.14	1.87	4.12	1.67	1.27	.82	.41	.31	.81	2.18	2.16
28	2.10	4.22	1.79	4.19	1.59	1.23	.77	.36	.33	.82	2.16	2.19
29	2.04	4.20	1.72	4.20	---	1.18	.71	.33	.38	.82	2.15	2.18
30	1.99	4.18	1.65	4.16	---	1.11	.64	.37	.45	.80	2.13	2.16
31	1.94	---	1.59	4.10	---	1.08	---	.45	---	.78	2.10	---
MEAN	2.73	2.12	2.71	1.94	2.58	1.61	.80	---	.29	.76	1.54	2.00
MAX	3.21	4.22	4.09	4.20	4.02	1.96	1.07	---	.56	1.01	2.18	2.19
MIN	1.94	1.13	1.59	.95	1.59	1.08	.57	---	.03	.53	.74	1.84

CAL YR 1988 MEAN 2.72 MAX 5.16 MIN .96

ST. JOHNS RIVER BASIN ABOVE OKLAWAHA RIVER

02234100 DEEP CREEK NEAR OSTEEN, FL

LOCATION.--Lat 28°50'45", long 81°04'46", in NW¼ sec.13, T.19 S., R.32 E., Volusia County, Hydrologic Unit 03080101, on right bank 50 ft downstream from bridge on Osteen-Maytown Road, 3.2 mi upstream from Cow Creek, 4.5 mi east of Osteen, and 5.0 mi upstream from mouth.

DRAINAGE AREA.--About 140 mi^2, includes the total area drained by Deep Creek and Deep Creek diversion canal.

PERIOD OF RECORD.--October 1964 to September 1966, January 1981 to current year.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929. October 1964 to September 1966 at site 50 ft upstream at same datum.

REMARKS.--Estimated daily discharges: Nov. 9 to Dec. 7, Feb. 22,23, Mar. 1-9. Records fair. Flow affected at times by backwater from St. Johns River. Some flow above station is diverted through Deep Creek diversion canal near Osteen (station 02234180) at high water and by interconnec-tion of drainage canals. Discharge for water years 1965-66 and 1982-89 is a summation of flow of Deep Creek and Deep Creek diversion canal.

AVERAGE DISCHARGE.--Combined flow, 10 years (water years 1965-66, 1982-89), 110 ft^3/s.

EXTREMES FOR PERIOD OF RECORD.--Combined flow, maximum daily discharge, 1,930 ft^3/s, Sept. 21, 1985; maximum gage height, 9.99 ft, Sept. 21, 1985; no flow for many days in 1981 and 1985; creek dry at gage for many days in 1981.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Sept. 14, 1964, reached a stage of 11.96 ft, from floodmarks, discharge, 2,630 ft^3/s.

EXTREMES FOR CURRENT YEAR.--Combined flow, maximum daily discharge, 631 ft^3/s, Jan. 23; maximum gage height, 7.80 ft, Jan. 23,24; minimum daily discharge, 1.2 ft^3/s, June 4; minimum gage height, 1.46 ft, June 5.

COMBINED DISCHARGE, IN CUBIC FEET PER SECOND, OF DEEP CREEK AND DEEP CREEK DIVERSION CANAL
WATER YEAR OCTOBER 1988 TO SEPTEMPER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	47	5.4	91	15	159	75	14	11	2.5	21	4.5	13
2	42	4.6	81	14	143	286	11	7.8	2.4	12	3.6	12
3	50	5.2	73	13	131	187	9.6	4.3	1.4	7.9	3.3	11
4	88	12	65	13	122	145	9.0	3.7	1.2	6.1	3.8	10
5	87	10	57	11	110	108	10	3.2	3.4	10	3.2	10
6	84	9.6	51	9.7	100	83	9.4	3.1	5.5	11	2.9	10
7	80	10	46	9.3	90	71	7.9	3.1	3.5	7.2	2.8	8.9
8	74	9.8	40	9.3	81	63	7.1	3.2	4.6	6.9	3.8	9.3
9	66	8.2	36	9.3	73	51	6.8	3.5	6.4	5.2	13	42
10	59	7.4	31	9.5	64	47	6.6	4.3	4.5	4.0	20	53
11	53	6.5	29	8.7	57	43	7.4	8.4	2.1	5.0	15	31
12	46	6.0	35	8.2	51	40	5.9	3.8	4.8	13	19	21
13	40	5.8	35	7.7	48	36	5.9	3.0	7.4	11	155	16
14	34	5.2	31	6.8	44	33	6.2	3.1	2.7	7.3	145	17
15	30	4.7	29	6.7	39	31	12	5.3	1.9	5.4	64	13
16	27	4.4	28	8.1	35	29	9.1	3.7	1.6	6.5	35	11
17	23	4.1	26	7.8	32	26	6.6	2.2	2.4	6.0	25	17
18	21	3.9	24	7.0	28	25	7.0	2.2	2.3	7.5	21	23
19	20	3.7	22	6.7	27	25	4.8	2.7	1.8	17	22	20
20	19	3.6	20	6.4	25	22	4.9	3.1	1.8	20	27	15
21	17	3.8	19	14	24	20	7.0	3.5	3.3	21	64	13
22	15	25	19	427	23	18	5.3	4.6	6.7	13	53	13
23	12	413	19	631	22	17	4.7	5.5	7.4	8.0	48	27
24	10	276	18	438	20	18	4.0	3.0	56	6.1	44	78
25	9.6	189	17	360	19	16	3.4	3.0	67	4.8	36	111
26	8.2	150	17	316	18	15	3.4	3.0	28	4.0	39	150
27	7.2	125	15	285	17	15	3.3	2.9	11	3.5	30	163
28	6.6	114	16	251	16	14	3.1	2.7	7.1	3.2	24	117
29	5.9	105	16	220	---	13	3.6	2.6	12	3.0	19	86
30	4.8	97	16	198	---	12	5.7	3.3	21	2.9	16	63
31	5.6	---	15	180	---	13	---	3.0	---	4.1	14	---
TOTAL	1091.9	1527.9	1037	3507.2	1618	1597	204.7	121.8	283.7	263.6	974.9	1184.2
MEAN	35.2	54.3	33.5	113	57.8	51.5	6.82	3.93	9.46	8.50	31.4	39.5
MAX	88	413	91	631	159	286	14	11	67	21	155	163
MIN	4.8	3.6	15	6.4	16	12	3.1	2.2	1.2	2.9	2.8	8.9

CAL YR 1988 TOTAL 22983.9 MEAN 62.8 MAX 503 MIN 1.2
WTR YR 1989 TOTAL 13511.9 MEAN 37.0 MAX 631 MIN 1.2

ST. JOHNS RIVER

ST. JOHNS RIVER BASIN ABOVE OKLAWAHA RIVER

02234180 DEEP CREEK DIVERSION CANAL NEAR OSTEEN, FL

LOCATION.--Lat 28°50'44", long 81°06'06", in NW¼ sec.14, T.19 S., R.32 E., Volusia County, Hydrologic Unit 03080101, on left bank, 90 ft downstream from bridge on Osteen-Maytown Road, 1.6 mi upstream from mouth, and 3.7 mi east of Osteen.

DRAINAGE AREA.--70 mi^2, approximately.

PERIOD OF RECORD.--1935, 1956 (one discharge measurement each year); September 1964 to September 1966 (discharge measurements and gage heights); March to September 1981 (discharge measurements only); October 1981 to current year (gage heights only).

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929. September 1964 to September 1966, nonrecording gage near present site at same datum.

REMARKS.--Canal diverts flow from Deep Creek to St. Johns River. Flow affected at times by backwater from St. Johns River.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 11.41 ft Apr. 9, 1982, estimated; minimum gage height, 3.53 ft, all or part of each day, June 5-11, 1985.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Sept. 12, 1964, reached a stage of 13.17 ft, from floodmarks, discharge, 878 ft^3/s; no flow observed June 24, 1981.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 9.76 ft, Jan. 22; minimum, 3.58 ft, all or part of each day June 5-8

GAGE HEIGHT, IN FEET ABOVE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.20	3.95	---	4.35	5.43	---	4.01	4.10	3.75	4.11	3.86	3.83
2	4.25	3.92	---	4.31	5.27	---	3.97	3.97	3.75	4.02	3.82	3.80
3	4.37	3.93	---	4.30	5.16	---	3.93	3.79	3.67	3.91	3.78	3.79
4	4.70	4.08	---	4.30	5.08	---	3.92	3.73	3.60	3.83	3.75	3.76
5	4.96	4.10	---	4.25	4.99	---	3.89	3.71	3.59	3.94	3.73	3.80
6	5.08	4.13	---	4.20	4.92	---	3.88	3.68	3.58	4.00	3.70	3.80
7	5.08	4.18	---	4.19	4.84	---	3.86	3.69	3.59	3.90	3.67	3.77
8	4.39	4.17	4.46	4.18	4.80	---	3.84	3.79	3.67	3.83	3.66	3.77
9	4.87	---	4.44	4.20	4.74	4.51	3.83	3.78	3.82	3.78	3.86	4.07
10	4.75	---	4.41	4.22	4.67	4.49	3.86	3.82	3.72	3.74	4.30	4.31
11	4.64	---	4.43	4.18	4.62	4.46	3.85	3.90	3.68	3.78	4.21	4.16
12	4.55	---	4.51	4.16	4.58	4.41	3.83	3.78	3.78	4.21	4.31	4.05
13	4.46	---	4.54	4.12	4.55	4.37	3.82	3.76	4.01	4.20	5.79	4.01
14	4.39	---	4.51	4.11	4.52	4.34	3.87	3.78	3.80	4.06	5.46	4.09
15	4.32	---	4.49	4.10	4.48	4.30	3.99	3.85	3.74	3.94	4.65	3.97
16	4.27	---	4.47	4.15	4.42	4.26	3.89	3.78	3.71	3.90	4.30	3.92
17	4.24	---	4.45	4.13	4.40	4.23	3.81	3.71	3.81	3.85	4.11	3.96
18	4.18	---	4.42	4.11	4.36	4.22	3.78	3.71	3.80	3.82	4.00	4.00
19	4.17	---	4.40	4.12	4.34	4.20	3.78	3.79	3.74	4.15	3.99	4.01
20	4.16	---	4.38	4.11	4.32	4.20	3.77	3.83	3.73	4.12	4.09	3.95
21	4.13	---	4.38	4.23	4.30	4.16	3.85	3.85	3.74	3.98	4.58	3.90
22	4.11	---	4.36	7.39	4.32	4.12	3.84	3.86	3.93	3.88	4.44	3.91
23	4.06	---	4.36	8.13	4.32	4.09	3.83	3.80	3.87	3.82	4.44	4.23
24	4.03	---	4.39	7.51	4.30	4.08	3.79	3.74	4.57	3.78	4.49	4.90
25	4.01	---	4.39	7.44	4.28	4.08	3.66	3.77	4.88	3.76	4.39	5.35
26	3.98	---	4.36	7.15	4.26	4.08	3.69	3.78	4.31	3.73	4.30	5.50
27	3.97	---	4.35	6.82	4.26	4.08	3.74	3.74	4.04	3.70	4.20	5.70
28	3.96	---	4.36	6.46	4.25	4.08	3.69	3.74	3.90	3.69	4.10	5.30
29	3.95	---	4.36	6.14	---	4.08	3.77	3.74	4.03	3.67	4.01	4.97
30	3.92	---	4.36	5.87	---	4.05	3.87	3.77	4.09	3.66	3.94	4.70
31	3.97	---	4.35	5.65	---	4.06	---	3.78	---	3.74	3.88	---
MEAN	4.35	---	---	5.05	4.60	---	3.84	3.79	3.86	3.89	4.19	4.24
MAX	5.08	---	---	8.13	5.43	---	4.01	4.10	4.88	4.21	5.79	5.70
MIN	3.92	---	---	4.10	4.25	---	3.66	3.68	3.58	3.56	3.66	3.76

ST. JOHNS RIVER BASIN ABOVE OKLAWAHA RIVER

02234324 HOWELL CREEK NEAR SLAVIA, FL

LOCATION.--Lat 28°38'51", long 81°15'53", in SE¼ sec.24 (corrected), T.21 S., R.30 E., Seminole County, Hydrologic Unit 03080101, on right bank 15 ft upstream of box culvert on Red Bug Road, 0.2 mi east of Tuskawilla Road, 2.1 mi west of Slavia, and 4.6 mi upstream from mouth.

DRAINAGE AREA.--29.2 mi^2 .

PERIOD OF RECORD.--February 1972 to September 1979, October 1980 to January 1981 (discharge measurements only), February 1981 to current year.

GAGE.--Water-stage recorder and culvert control. Datum of gage is National Geodetic Vertical Datum of 1929 (Florida Department of Transportation bench mark). Prior to Oct. 1, 1980, at site 15 ft downstream at same datum.

REMARKS.--Records fair. Some regulation by retention ponds in urban areas upstream from station.

AVERAGE DISCHARGE.--15 years (water years 1973-79, 1982-89), 31.7 ft^3/s, 14.74 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 412 ft^3/s, June 28, 1974, gage height, 36.71 ft; minimum, 0.91 ft^3/s, May 18,19, 1985, gage height, 32.24 ft.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 237 ft^3/s, Nov. 23, gage height, 35.32 ft; minimum, 3.1 ft^3/s, May 13,14,20,21, gage height, 32.29 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	29	6.8	68	19	46	11	5.8	4.7	6.6	13	23	33
2	27	7.9	62	18	44	16	5.3	4.4	6.2	13	23	36
3	34	8.1	57	18	42	16	5.3	4.3	5.8	12	28	35
4	43	12	52	17	39	17	5.1	4.2	5.8	9.5	27	33
5	42	14	48	16	37	17	5.7	4.0	5.3	8.8	25	32
6	40	15	45	15	35	17	5.6	4.0	6.1	8.7	23	32
7	38	15	42	14	33	17	4.4	3.8	5.9	8.3	21	34
8	35	15	40	14	31	17	4.4	3.6	8.3	8.1	19	37
9	32	15	38	13	30	16	5.3	3.4	8.7	14	18	41
10	29	15	36	13	27	15	6.1	3.4	8.9	63	18	40
11	27	15	36	13	24	14	6.1	3.4	9.0	62	24	38
12	24	15	40	12	22	14	5.3	3.3	7.6	54	27	36
13	23	14	41	12	21	14	4.6	3.2	6.8	55	39	33
14	21	14	39	12	19	13	4.2	3.4	6.2	51	44	30
15	19	14	38	11	18	13	5.6	3.8	6.0	48	43	27
16	17	14	37	12	17	12	5.8	3.5	5.5	53	42	26
17	16	13	35	12	17	11	5.8	3.4	5.5	51	40	32
18	15	13	32	12	16	11	5.8	3.4	5.1	47	39	33
19	15	13	30	11	15	10	5.8	3.4	4.7	46	41	30
20	13	12	28	10	14	9.5	5.8	3.2	4.6	43	45	29
21	13	11	27	21	14	9.1	5.4	3.5	4.4	40	50	28
22	12	12	26	60	14	9.2	4.9	3.8	6.4	37	48	27
23	12	108	25	65	13	9.5	4.9	3.6	7.1	34	46	32
24	11	102	24	69	12	6.4	5.1	3.5	9.8	31	43	46
25	10	102	23	69	11	6.3	5.0	4.1	13	32	42	56
26	9.8	96	23	65	10	5.8	4.8	4.9	10	30	41	57
27	9.4	91	22	62	9.9	6.1	5.0	3.8	9.7	27	40	58
28	9.1	87	21	58	9.6	6.7	4.8	6.5	9.6	24	40	59
29	8.7	81	20	54	---	5.5	4.3	9.3	14	22	38	55
30	7.4	75	20	51	---	4.7	4.2	10	15	21	35	54
31	7.1	---	19	48	---	6.0	---	7.3	---	20	32	---
TOTAL	648.5	1025.8	1094	896	640.5	355.8	156.2	134.1	227.6	986.4	1064	1139
MEAN	20.9	34.2	35.3	28.9	22.9	11.5	5.21	4.33	7.59	31.8	34.3	38.0
MAX	43	108	68	69	46	17	6.1	10	15	63	50	59
MIN	7.1	6.8	19	10	9.6	4.7	4.2	3.2	4.4	8.1	18	26
CFSM	.72	1.17	1.21	.99	.78	.39	.18	.15	.26	1.09	1.18	1.30
IN	.83	1.31	1.39	1.14	.82	.45	.20	.17	.29	1.26	1.36	1.45

CAL YR 1988 TOTAL 12616.3 MEAN 34.5 MAX 150 MIN 6.8 CFSM 1.18 IN 16.07
WTR YR 1989 TOTAL 8367.9 MEAN 22.9 MAX 108 MIN 3.2 CFSM .79 IN 10.66

ST. JOHNS RIVER BASIN ABOVE OKLAWAHA RIVER

02234365 SOLDIER CREEK HEADWATERS AT LAKE MARY, FL

LOCATION.--Lat 28°44'57", long 81°20'09", in NE¼ sec.17, T.20 S., R.30 E., Seminole County, Hydrologic Unit 03080101, on left bank at upstream side of culverts on Longwood-Lake Mary Road at City of Lake Mary, 0.9 mi upstream from Seaboard Coast Line Railroad, and 3.6 mi upstream from mouth.

DRAINAGE AREA.--7.86 mi^2.

PERIOD OF RECORD.--October 1987 to current year.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (Seminole County bench mark). Prior to Nov. 3, 1987, nonrecording gage at same site and datum.

REMARKS.--Records good except those below 1.0 ft^3/s, which are fair. Some regulation at low flow by retention ponds in headwaters.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 28 ft^3/s, Sept. 8, 1988, gage height, 39.41 ft, release of backwater from obstructed culvert; maximum gage height, 39.68 ft, Sept. 8, 1988, backwater from obstructed culvert; no flow for many days in 1989, creek dry at gage for many days.

EXTREMES OUTSIDE PERIOD OF RECORD.--Zero flow was observed Aug. 27, 1987.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 12 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 23	1230	*16	*38.96	No other peak greater than base discharge.			

No flow for many days; creek dry at gage for many days.

DISCHARGE IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.0	.36	4.0	1.2	2.1	.36	.04	.00	.00	4.4	.01	2.8
2	1.8	.35	3.5	1.1	1.9	1.4	.03	.00	.00	4.4	.00	3.5
3	2.9	.32	3.1	1.1	1.8	1.7	.03	.00	.00	4.1	.00	3.2
4	4.2	.58	2.8	.99	1.6	1.5	.02	.00	.00	3.9	.00	2.9
5	3.8	.72	2.5	.87	1.5	1.4	.02	.00	.00	3.6	.00	2.9
6	3.4	.69	2.3	.77	1.3	1.3	.01	.00	.00	3.4	.00	3.1
7	3.0	.65	2.2	.72	1.2	1.2	.00	.00	.00	3.1	.00	2.9
8	2.7	.66	2.1	.66	1.1	1.1	.00	.00	.00	2.8	.00	2.6
9	2.4	.63	2.0	.64	1.0	1.1	.00	.00	.00	2.4	.00	2.4
10	2.2	.60	1.9	.60	.91	1.0	.00	.00	.00	2.2	.01	2.2
11	2.0	.59	2.1	.59	.81	.94	.00	.00	.00	1.9	.06	2.0
12	1.8	.56	2.5	.56	.74	.86	.00	.00	.00	1.7	.45	1.8
13	1.7	.54	2.4	.56	.67	.77	.00	.00	.00	1.5	2.8	1.6
14	1.5	.52	2.2	.56	.65	.66	.00	.00	.00	1.3	4.3	1.8
15	1.3	.48	2.0	.52	.61	.55	.01	.00	.00	1.1	4.1	1.8
16	1.2	.47	1.8	.56	.55	.44	.02	.00	.00	.90	3.8	1.7
17	1.1	.47	1.7	.52	.50	.38	.02	.00	.00	.75	3.3	1.7
18	1.1	.45	1.5	.47	.47	.33	.01	.00	.00	.65	2.9	1.9
19	1.0	.44	1.4	.43	.44	.29	.00	.00	.00	.67	2.7	1.9
20	.99	.44	1.4	.43	.42	.25	.00	.00	.00	.57	2.9	1.7
21	.96	.44	1.3	.91	.40	.22	.00	.00	.00	.46	3.1	1.6
22	.87	.58	1.2	5.5	.39	.20	.00	.00	.00	.38	2.8	1.5
23	.76	13	1.2	6.1	.39	.21	.00	.00	.00	.31	2.6	2.0
24	.67	13	1.3	5.3	.37	.20	.00	.00	.00	.23	2.4	3.3
25	.58	9.5	1.3	4.6	.33	.17	.00	.00	.00	.17	2.8	4.2
26	.52	7.7	1.3	4.1	.30	.15	.00	.00	.00	.12	4.0	4.2
27	.45	6.6	1.3	3.4	.27	.13	.00	.00	.00	.07	3.9	4.4
28	.42	5.8	1.3	3.1	.25	.12	.00	.00	.43	.03	3.6	4.3
29	.40	5.0	1.3	2.8	---	.09	.00	.00	3.1	.01	3.3	4.1
30	.38	4.6	1.4	2.5	---	.08	.00	.00	4.2	.00	2.9	3.7
31	.37	---	1.3	2.3	---	.07	---	.00	---	.01	2.6	---
TOTAL	48.47	76.74	59.6	54.46	22.97	19.17	0.21	0.00	7.73	47.13	61.33	79.7
MEAN	1.56	2.56	1.92	1.76	.82	.62	.007	.00	.26	1.52	1.98	2.66
MAX	4.2	13	4.0	6.1	2.1	1.7	.04	.00	4.2	4.4	4.3	4.4
MIN	.37	.32	1.2	.43	.25	.07	.00	.00	.00	.00	.00	1.5

CAL YR 1988 TOTAL 900.24 MEAN 2.46 MAX 24 MIN .02 CFSM .31 IN 4.25
WTR YR 1989 TOTAL 477.51 MEAN 1.31 MAX 13 MIN .00 CFSM .25 IN 2.26

ST. JOHNS RIVER

ST. JOHNS RIVER BASIN ABOVE OKLAWAHA RIVER

02234367 SOLDIER CREEK AT LAKE MARY, FL

LOCATION.--Lat 28°44'16", long 81°19'23", in NE¼ sec.21, T.20 S., R.30 E., Seminole County, Hydrologic Unit 03080101, on left bank at upstream side of culverts on private road, 0.2 mi west of Country Club Road at City of Lake Mary, 0.3 mi downstream from Seaboard Coast Line Railroad, and 2.4 mi upstream from mouth.

DRAINAGE AREA.--9.16 mi^2.

PERIOD OF RECORD.--October 1987 to current year.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (Seminole County bench mark). Prior to Nov. 4, 1987, nonrecording gage at same site and datum.

REMARKS.--Estimated daily discharges: Nov. 27 to Dec. 4, Jan. 27 to Feb. 3, Apr. 17-19, June 16-29. Records fair except those below 1.0 ft^3/s, which are poor.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16 ft^3/s, Sept. 8, 1988; maximum gage height, 33.31 ft, Sept. 9, 1988; no flow for many days in 1989; creek dry at gage for many days in 1989.

EXTREMES FOR CURRENT YEAR.--Peak discharges greter than base discharge of 12 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 23	1100	*14	*33.13	Aug. 13	1600	13	32.94
Jan. 22	0700	*14	33.05	Aug. 25	1700	13	32.96

No flow for many days; creek dry at gage for many days.

DISCHARGE IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.6	.50	8.0	2.4	4.0	.92	.21	.07	.00	1.9	.02	3.0
2	3.3	.48	7.0	2.3	3.5	1.8	.19	.06	.00	3.0	.02	4.2
3	4.4	.47	6.5	2.3	3.0	1.8	.19	.04	.00	3.9	.04	3.4
4	5.9	.84	6.0	2.2	2.7	1.7	.19	.04	.00	4.3	.02	2.9
5	5.6	.80	5.6	2.1	2.3	1.7	.18	.02	.00	4.3	.01	3.6
6	5.1	.86	4.9	2.0	2.1	1.7	.17	.01	.00	4.5	.01	3.9
7	4.6	.83	4.4	1.8	2.0	1.7	.17	.01	.00	4.3	.0	3.4
8	4.3	.78	4.0	1.6	1.9	1.7	.16	.00	.00	3.9	.00	2.8
9	3.9	.73	3.8	1.4	1.8	1.6	.15	.00	.00	3.6	.01	2.6
10	3.6	.71	3.5	1.3	1.6	1.5	.13	.00	.00	3.0	.05	2.6
11	3.2	.68	3.7	1.2	1.5	1.4	.12	.03	.00	2.5	.06	2.2
12	2.9	.68	5.1	1.1	1.4	1.3	.15	.02	.00	2.4	.61	2.1
13	2.7	.67	5.1	1.0	1.3	1.3	.14	.00	.00	2.2	3.8	1.9
14	2.3	.64	4.7	.95	1.3	1.1	.12	.00	.00	1.8	6.3	1.9
15	2.1	.57	4.3	.93	1.2	.97	.17	.00	.00	1.3	5.3	1.7
16	1.9	.51	3.7	1.0	1.1	.81	.20	.00	.00	1.0	4.5	1.7
17	1.9	.50	3.3	.89	1.0	.75	.14	.00	.00	.72	3.6	2.0
18	1.7	.53	3.0	.84	.99	.67	.10	.00	.00	.64	3.5	2.1
19	1.6	.49	2.7	.52	.90	.61	.07	.00	.00	.73	3.6	2.0
20	1.5	.46	2.4	.38	.84	.56	.06	.00	.00	.47	4.1	1.8
21	1.4	.45	2.1	1.9	.86	.54	.07	.00	.00	.30	4.3	1.7
22	1.2	.68	1.9	12	.90	.52	.06	.02	.00	.29	3.5	1.6
23	1.1	12	2.0	12	.86	.53	.07	.00	.00	.24	2.9	2.3
24	1.1	14	2.1	12	.92	.49	.06	.00	.00	.18	2.3	3.8
25	.96	14	2.1	12	.87	.41	.06	.00	.00	.13	4.6	4.6
26	.81	13	2.2	11	.88	.39	.05	• .00	.00	.08	5.9	4.5
27	.78	12	2.2	9.0	.78	.34	.03	.00	.00	.04	4.7	4.3
28	.69	11	2.4	8.0	.60	.30	.02	.00	.05	.02	3.8	4.2
29	.59	10	2.8	6.5	---	.26	.02	.00	.80	.01	3.2	3.8
30	.57	9.0	3.0	5.5	---	.22	.04	.00	1.6	.01	2.6	3.4
31	.59	---	2.8	5.0	---	.24	---	.00	---	.02	2.2	---
TOTAL	75.89	108.86	117.3	123.11	43.12	29.83	3.49	0.32	2.45	51.78	75.55	86.0
MEAN	2.45	3.63	3.78	3.97	1.54	.96	.12	.010	.082	1.67	2.44	2.87
MAX	5.9	14	8.0	12	4.0	1.8	.21	.07	1.6	4.5	6.3	4.6
MIN	.57	.45	1.9	.38	.60	.22	.02	.00	.00	.01	.00	1.6
CFSM	.27	.40	.41	.43	.17	.11	.01	.00	.01	.18	.27	.31
IN	.31	.44	.48	.50	.18	.12	.01	.00	.01	.21	.31	.35

WTR YR 1989 TOTAL 717.70 MEAN 1.97 MAX 14 MIN .00 CFSM .21 IN 2.91

ST. JOHNS RIVER BASIN ABOVE OKLAWAHA RIVER

02234384 SOLDIER CREEK NEAR LONGWOOD, FL

LOCATION.--Lat 28°43'07", long 81°18'32", in SW¼ sec.27, T.20 S., R.30 E., Seminole County, Hydrologic Unit 03080101, on left downstream side of culvert on State Highway 419, 50 ft upstream from Seaboard Coast Line Railroad bridge, 2.5 mi northeast of Longwood, and 1.2 mi upstream from mouth.

DRAINAGE AREA.--21.2 mi^2.

PERIOD OF RECORD.--February 1972 to September 1975, October 1975 to September 1977 (discharge measurements only), October 1977 to September 1979, October 1980 to September 1986 (discharge measurements only), October 1986 to current year.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Seminole County Engineer). Nov. 5, 1975 to July 26, 1977 and Oct. 1, 1980 to Sept. 30, 1986, nonrecording gage at same site and datum.

REMARKS.--Estimated daily discharges: Mar. 18 to Apr. 28. Records good except for periods of estimated daily record, which are poor. Since about 1980, some regulation by retention ponds in headwaters.

AVERAGE DISCHARGE.--8 years (water years 1973-75, 1978-79, 1987-89), 11.1 ft^3/s, 7.11 in/yr, 8,040 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 429 ft^3/s, July 19, 1978, gage height 14.23 ft; maximum gage height, 14.41 ft, Sept. 13, 1973; minimum discharge observed, 0.15 ft^3/s, June 25, 1981, discharge measurement.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 160 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov 23	0600	*376	*13.38	Aug 13	1800	177	10.91
Jan. 22	0900	219	11.55	Aug 25	1800	182	10.82

Minimum discharge, 0.59 ft^3/s, Aug. 7; minimum gage height, 6.40 ft, June 11-13,16.

DISCHARGE IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.3	2.9	17	7.1	12	12	2.7	6.2	1.0	3.9	1.1	15
2	4.6	2.9	15	6.8	12	17	2.5	5.9	.96	3.5	1.6	19
3	16	3.0	14	6.8	11	13	2.5	4.6	.91	3.4	2.0	16
4	17	4.2	13	6.4	10	11	2.4	3.4	.91	3.4	1.3	15
5	11	4.1	12	6.0	9.6	9.7	2.3	2.7	.91	3.4	.99	17
6	9.5	3.8	12	5.8	9.6	9.3	1.9	2.0	1.5	5.2	.87	17
7	8.9	3.1	11	5.6	9.0	9.2	1.9	2.4	.99	4.5	.77	16
8	8.1	3.0	10	5.5	8.5	9.3	1.8	2.2	2.0	3.6	1.8	15
9	7.4	2.9	9.7	5.4	7.8	8.6	1.7	2.2	1.5	3.2	1.4	15
10	6.4	2.9	9.1	5.3	7.4	8.5	1.6	3.0	1.2	2.9	3.4	15
11	5.7	2.9	12	5.1	7.0	7.8	1.5	3.3	.95	2.6	5.7	14
12	5.6	2.8	14	5.0	6.5	7.4	1.7	2.4	.92	3.8	18	13
13	5.0	2.7	12	4.9	5.9	7.2	1.5	2.2	.93	3.0	56	14
14	4.6	2.7	11	4.7	5.6	7.0	1.4	2.2	1.1	2.5	26	16
15	4.2	2.7	10	4.5	5.4	6.8	4.9	2.6	1.0	2.1	15	14
16	4.1	2.7	9.6	4.6	4.9	6.5	2.7	2.0	.95	1.7	13	15
17	4.5	2.7	9.5	4.4	4.7	6.2	3.0	2.0	1.0	1.5	11	21
18	4.0	2.7	8.7	4.2	4.6	5.9	2.3	1.9	.97	1.4	12	19
19	3.8	2.7	8.4	4.1	4.5	5.6	1.5	1.8	1.0	1.7	13	17
20	3.6	2.6	7.9	4.3	4.5	5.4	1.3	1.7	1.2	1.6	17	15
21	3.4	2.4	7.9	20	4.4	5.1	1.6	2.6	1.3	1.3	16	14
22	3.3	3.7	7.9	100	4.7	5.2	1.3	2.2	1.5	2.0	13	14
23	3.3	207	8.2	30	4.3	5.3	1.5	1.7	4.1	1.5	11	20
24	3.2	47	8.2	23	4.1	4.9	1.3	1.4	8.4	1.3	10	40
25	3.2	37	8.0	21	4.0	4.3	1.3	1.5	4.5	1.3	45	29
26	3.2	31	7.5	19	3.9	4.0	1.2	1.5	2.2	1.1	28	23
27	3.1	26	7.5	18	3.8	3.7	1.6	1.3	1.4	.97	19	20
28	3.0	23	7.2	17	3.8	3.4	2.0	1.4	8.3	.97	17	20
29	3.0	20	7.1	16	---	3.1	3.4	1.3	12	.94	15	18
30	3.0	19	7.3	14	---	2.9	4.5	1.6	5.8	.90	15	16
31	2.9	---	7.6	13	---	3.0	---	1.2	---	1.6	14	---
TOTAL	173.9	476.1	310.3	397.5	183.5	218.3	62.8	74.4	71.40	72.78	404.93	532
MEAN	5.61	15.9	10.0	12.8	6.55	7.04	2.09	2.40	2.38	2.35	13.1	17.7
MAX	17	207	17	100	12	17	4.9	6.2	12	5.2	56	40
MIN	2.9	2.4	7.1	4.1	3.8	2.9	1.2	1.2	.91	.90	.77	13
CFSM	.26	.75	.47	.60	.31	.33	.10	.11	.11	.11	.62	.84
IN	.31	.84	.54	.70	.32	.38	.11	.13	.13	.13	.71	.93

CAL YR 1988 TOTAL 5216.3 MEAN 14.3 MAX 207 MIN 1.4 CFSM .67 IN. 9.15
WTR YR 1989 TOTAL 2977.91 MEAN 8.16 MAX 207 MIN .77 CFSM .38 IN. 5.23

ST. JOHNS RIVER BASIN ABOVE OKLAWAHA RIVER

02234400 GEE CREEK NEAR LONGWOOD, FL

LOCATION.--Lat 28°42'14", long 81°17'27", in SE¼ sec.38, T.20 S., R.30 E., Seminole County, Hydrologic Unit 03080101, on left bank at downstream side of box culvert on State Highway 419, 700 ft upstream from Seaboard Coast Line Railroad bridge, 1.0 mi upstream from mouth, and 3.5 mi east of Longwood.

DRAINAGE AREA.--12.8 mi^2.

PERIOD OF RECORD.--February 1972 to September 1979, October 1980 to July 1985 (discharge measurements only), August 1985 to current year.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Seminole County Engineer). Apr. 11, 1978 to Sept. 30, 1979 at site 400 ft upstream at same datum, Oct. 1, 1980 to Aug. 11, 1985, nonrecording gage at present site and datum.

REMARKS.--Estimated daily discharges: Oct. 1-31, Feb. 12-17. Records fair.

AVERAGE DISCHARGE.--11 years (water years 1973-79, 1986-89), 15.8 ft^3/s, 16.76 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 310 ft^3/s, July 19, 1978, gage height, 14.31 ft; maximum gage height, 14.69 ft, June 30, 1974; minimum discharge, 1.0 ft^3/s, June 8,9, 1986; minimum gage height, 5.56 ft, Dec. 5, 1973.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 110 ft^3/s (revised) and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 23	0500	276	14.40	Mar. 1	2100	125	11.90
Jan. 22	1000	144	12.28	Sept. 24	1800	112	11.63

Minimum discharge, 1.3 ft^3/s, Aug. 8; minimum gage height, 7.05 ft, Apr. 28 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10	4.1	21	9.7	16	26	3.2	6.6	2.6	12	2.0	8.9
2	9.4	4.2	19	9.6	15	40	2.7	5.0	2.2	10	2.2	8.4
3	18	6.7	17	9.4	14	29	2.7	3.8	2.0	8.6	2.4	6.6
4	21	12	16	9.0	13	23	2.7	3.2	2.0	7.0	2.0	5.7
5	20	12	14	8.4	12	19	2.6	2.9	1.9	5.5	1.8	7.0
6	19	9.6	14	8.0	12	16	2.3	2.6	3.1	6.2	1.7	7.0
7	16	8.9	13	7.7	11	14	2.0	2.3	2.4	5.0	1.5	7.0
8	14	8.1	13	7.5	11	14	2.0	2.2	5.8	4.1	11	8.1
9	12	6.8	13	7.3	10	12	2.0	2.2	7.5	3.6	6.2	24
10	11	5.9	14	7.1	9.0	12	1.9	2.8	6.6	3.1	6.9	25
11	10	5.1	17	7.0	8.4	11	1.9	3.2	3.8	2.8	8.5	18
12	9.6	4.6	21	6.8	7.8	9.9	1.9	2.3	2.7	7.2	13	12
13	9.0	4.5	23	6.7	7.4	9.2	1.9	2.2	2.3	4.7	21	9.8
14	8.4	4.4	22	6.6	7.0	8.5	1.9	3.8	2.0	4.4	24	8.5
15	7.8	4.2	20	6.4	6.8	7.9	6.1	5.4	1.9	4.9	19	7.2
16	7.6	4.5	18	6.2	6.5	7.4	4.2	2.6	1.9	6.4	14	7.4
17	7.2	4.9	17	5.7	6.3	7.0	4.6	2.3	2.0	5.7	11	10
18	7.2	6.1	15	5.4	6.2	6.6	3.9	2.1	1.7	5.1	10	13
19	7.0	7.5	14	5.2	6.1	6.2	2.8	2.0	1.8	5.2	12	11
20	6.4	7.5	13	5.4	6.0	5.9	2.4	2.0	1.7	4.5	20	9.0
21	6.4	6.3	13	26	5.9	5.6	2.2	4.3	1.6	4.0	22	7.4
22	6.0	7.7	12	101	6.3	5.4	2.1	3.3	2.7	6.4	19	7.8
23	6.0	170	12	83	5.6	5.6	2.0	2.3	2.6	5.0	15	15
24	5.6	102	12	67	5.2	5.3	1.9	2.1	10	4.9	12	48
25	5.3	71	11	48	5.0	5.0	1.8	3.7	5.8	4.5	16	55
26	5.2	48	11	35	4.8	4.7	1.7	5.5	5.9	3.5	17	44
27	5.0	35	10	29	4.7	4.3	1.7	6.3	4.9	3.0	15	34
28	4.8	29	10	25	4.5	4.2	1.6	5.0	5.5	2.6	12	29
29	4.6	25	10	22	---	3.8	7.7	4.2	8.5	2.3	10	25
30	4.3	23	9.9	20	---	3.3	7.5	3.5	12	2.2	8.3	24
31	4.1	---	9.7	18	---	3.3	---	3.3	---	2.2	7.1	---
TOTAL	287.9	648.6	454.6	619.1	233.5	335.1	85.9	105.0	117.6	156.6	343.6	502.8
MEAN	9.29	21.6	14.7	20.0	8.34	10.8	2.86	3.39	3.92	5.05	11.1	16.8
MAX	21	170	23	101	16	40	7.7	6.6	12	12	24	55
MIN	4.1	4.1	9.7	5.2	4.5	3.3	1.6	2.0	1.7	2.2	1.5	5.7
AC-FT	571	1290	902	1230	463	665	170	208	233	311	682	997
IN.	.84	1.88	1.32	1.80	.68	.97	.25	.31	.34	.46	1.00	1.46

CAL YR 1988 TOTAL 6811.4 MEAN 18.6 MAX 170 MIN 4.0 AC-FT 13510 IN. 19.80
WTR YR 1989 TOTAL 3890.3 MEAN 10.7 MAX 170 MIN 1.5 AC-FT 7720 IN. 11.31

ST. JOHNS RIVER BASIN ABOVE OKLAWAHA RIVER

02234500 ST. JOHNS RIVER NEAR SANFORD, FL

LOCATION.--Lat 28°50'13", long 81°19'28", in SW¼ sec.16, T.19 S., R.30 E., Seminole County, Hydrologic Unit 03080101, on left bank at downstream side of bridge on U.S. Highways 17 and 92, at outlet of Lake Monroe, 4 mi northwest of Sanford, and 161 mi upstream from mouth.

DRAINAGE AREA.--2,582 mi^2.

PERIOD OF RECORD.--August 1941 to June 1956 (discharge measurements only), October 1964 to September 1968 (gage heights and occasional discharge measurements only), May 1987 to September 1989 (discontinued).

REVISED RECORDS.--WDR FL-75-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 0.09 ft below National Geodetic Vertical Datum of 1929. Since May 1987 auxiliary water-stage recorder at site 3.5 mi downstream.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Records of gage height are published as elevations for Lake Monroe (station 02234499) in the section of this report entitled LAKE ELEVATIONS.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge measured, 17,500 ft^3/s Oct. 14, 1953; maximum reverse flow measured, 1,420 ft^3/s June 8, 1955 (affected by tide).

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum gage height since at least 1871, 13.37 ft in fall of 1880, from information by Fred T. Williams, former city engineer for Sanford. Since July 1941: Maximum daily gage height, 8.59 ft, Oct. 15-17, 1953; minimum daily, -0.43 ft, Apr. 5, 1945 (published as elevations for Lake Monroe near Sanford).

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 2,730 ft^3/s, Feb. 3; maximum gage height, 2.57 ft, Oct. 10,11; minimum daily discharge, 205 ft^3/s, July 24; minimum gage height, -0.26 ft, June 18

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2060	1670	2610	1330	2700	951	918	714	772	645	695	1250
2	1940	1800	2690	1200	2700	1220	911	790	767	413	535	1100
3	2280	1900	2630	1060	2730	1190	884	815	853	633	428	1200
4	1960	1830	2700	1020	2720	1280	819	724	709	840	621	1220
5	2060	1950	2670	1090	2680	1370	830	807	745	813	584	371
6	1900	1910	2630	974	2670	1410	753	750	585	855	747	1320
7	1940	2060	2450	1000	2530	1350	805	818	707	803	757	1210
8	1830	1990	2490	954	2430	1160	894	804	545	712	522	921
9	2000	1860	2440	901	2240	1150	846	795	801	788	758	885
10	1970	1580	2420	841	2320	1270	766	757	550	820	438	1480
11	1850	1450	2330	849	2270	1710	565	852	e480	614	597	1480
12	2020	1280	2190	917	2210	1930	592	803	e450	803	796	1450
13	2180	1190	2080	988	2170	1980	596	812	e410	744	1100	1550
14	2110	1190	2090	1000	2160	1940	622	718	e420	859	1210	1480
15	2100	1100	2140	842	2160	1960	866	780	e450	888	1270	1470
16	2120	1140	2170	987	1860	1960	915	760	e500	604	1290	1510
17	2210	1020	2240	942	1580	1980	865	706	e470	632	1250	1520
18	2160	1000	2200	916	1340	1900	834	748	e440	250	1010	1320
19	2060	1060	2260	892	1410	1750	830	727	e410	774	1260	1440
20	2040	1030	2240	921	1520	1460	706	772	e380	592	321	1430
21	2130	1020	2180	977	1600	1280	731	820	351	493	1480	1470
22	2020	930	2100	666	1600	1160	809	542	424	593	1120	1750
23	1910	1670	2180	1650	1190	1010	867	838	655	579	1350	1770
24	1940	2070	2050	1890	1810	1090	853	811	682	205	1430	1210
25	1950	1990	2020	1930	1820	1160	823	611	703	606	1400	1590
26	1980	1970	2020	2040	1640	977	840	710	664	673	1280	1570
27	1770	2160	1800	2310	1420	1040	920	756	620	635	1250	1490
28	1860	2330	1790	2460	1310	1080	888	573	436	679	1130	1510
29	1820	2460	1640	2520	---	1060	761	456	746	767	1070	1260
30	1940	2560	1530	2610	---	1050	919	507	683	699	1140	769
31	1720	---	1420	2650	---	1030	---	620	---	783	1030	---
TOTAL	61830	49170	68400	41327	56790	42858	24229	22696	17408	20793	29869	39996
MEAN	1995	1639	2206	1333	2028	1383	808	732	580	671	964	1333
MAX	2280	2560	2700	2650	2730	1980	920	852	853	888	1480	1770
MIN	1720	930	1420	666	1190	951	566	456	351	205	321	371
CFSM	.77	.63	.85	52	.79	54	.31	.28	22	26	37	52
IN.	89	.71	.99	60	.82	.62	.35	.33	25	30	43	58

CAL YR 1988 TOTAL 739796 MEAN 2021 MAX 3410 MIN 522 CFSM .78 IN. 10.66
WTR YR 1989 TOTAL 475366 MEAN 1302 MAX 2730 MIN 205 CFSM .50 IN. 6.85

e Estimated

ST. JOHNS RIVER

ST. JOHNS RIVER BASIN ABOVE OKLAWAHA RIVER

02234990 LITTLE WEKIVA RIVER NEAR ALTAMONTE SPRINGS, FL

LOCATION.--Lat 28°41'13", long 81°23'50", in SE¼ sec.3, T.21 S., R.29 E., Seminole County, Hydrologic Unit 03080101, on left bank 50 ft downstream from bridge on State Highway 434, 200 ft upstream from Sanlando Springs outlet, 2.9 mi northwest of Post Office in Altamonte Springs, and 5.5 mi upstream from mouth.

DRAINAGE AREA.--90.7 mi^2.

PERIOD OF RECORD.--February 1972 to September 1979, February 1981 to September 1982 (gage heights and discharge measurements only), October 1982 to current year.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Seminole County Engineer). Feb. 11, 1981 to Nov. 28, 1985, at site 75 ft downstream at same datum.

REMARKS.--Records fair. Flow includes occasional pumpage from Cranes Roost basin.

AVERAGE DISCHARGE.--14 years (water years 1973-79, 1983-89), 35.0 ft^3/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 592 ft^3/s, July 22, 1984, gage height, 27.34 ft; maximum gage height 28.36 ft, Nov. 23, 1988; minimum discharge, 1.9 ft^3/s, May 7, 1973; minimum gage height, 23.14 ft, Jan. 1, 1985, site then in use.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 476 ft^3/s, Nov. 23, gage height, 28.36 ft; minimum discharge, 5.7 ft^3/s, May 28, gage height, 24.15 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	14	75	20	37	24	14	21	11	16	14	38
2	18	14	63	20	33	18	14	18	10	15	13	34
3	42	16	53	20	29	17	14	17	10	14	14	30
4	36	20	44	20	26	17	14	17	11	13	15	30
5	32	22	38	19	24	16	14	17	11	13	13	27
6	30	19	33	19	23	17	14	16	20	18	12	27
7	28	18	30	18	22	17	14	15	13	16	12	33
8	26	17	29	18	21	17	14	15	15	15	13	34
9	24	17	27	18	21	17	13	15	13	13	13	31
10	23	16	26	17	20	17	13	17	13	13	51	28
11	22	17	32	17	19	17	13	16	12	13	58	27
12	21	16	33	17	19	16	13	14	11	14	78	26
13	20	15	33	17	18	16	13	14	11	14	76	25
14	20	15	37	16	17	16	13	13	10	14	85	23
15	19	15	36	16	18	16	25	13	11	15	98	22
16	18	15	43	16	18	16	18	12	11	15	97	21
17	17	15	38	16	17	15	18	12	12	15	86	21
18	18	15	34	15	17	15	17	11	11	26	91	20
19	17	15	29	15	16	15	16	11	11	18	84	20
20	16	14	24	16	16	15	16	11	18	18	83	19
21	17	14	22	36	16	15	15	9.9	49	17	75	18
22	16	20	22	91	17	16	15	9.1	33	17	71	25
23	15	209	26	123	16	19	14	9.0	32	16	68	27
24	15	173	25	136	17	15	14	8.8	39	17	62	30
25	15	172	23	126	16	15	14	9.2	24	18	72	34
26	15	157	23	106	16	14	13	8.9	20	16	69	37
27	14	138	22	86	16	14	14	9.0	18	16	64	41
28	14	119	22	70	15	15	13	25	22	15	59	50
29	14	103	22	58	---	14	14	13	20	14	51	54
30	14	89	21	49	---	14	14	11	17	14	45	54
31	14	---	21	43	---	15	---	11	---	14	40	---
TOTAL	629	1519	1011	1274	560	500	440	418.9	519	482	1682	906
MEAN	20.3	50.6	32.6	41.1	20.0	16.1	14.7	13.5	17.3	15.5	54.3	30.2
MAX	42	209	75	136	37	24	25	25	49	26	98	54
MIN	14	14	21	15	15	14	13	8.8	10	13	12	18

CAL YR 1988 TOTAL 14405 MEAN 39.4 MAX 209 MIN 12
WTR YR 1989 TOTAL 9940.9 MEAN 27.2 MAX 209 MIN 8.8

ST. JOHNS RIVER BASIN ABOVE OKLAWAHA RIVER

02235000 WEKIVA RIVER NEAR SANFORD, FL

LOCATION.--Lat 28°48'54", long 81°25'10", in SE¼ sec.21, T.19 S., R.29 E., Seminole County, Hydrologic Unit 03080101, near right bank at downstream side of bridge on State Highway 46, 4.5 mi downstream from Little Wekiva River, 6.7 mi upstream from mouth, and 8.9 mi west of Sanford.

DRAINAGE AREA.--189 mi^2.

PERIOD OF RECORD.--October 1931 to September 1935 (discharge measurements only), October 1935 to current year.

GAGE.--Water-stage recorder. Datum of gage is 4.96 ft above National Geodetic Vertical Datum of 1929. Prior to Jan. 19, 1960, nonrecording gage at same site and datum.

REMARKS.--Records fair. Flow includes large ground-water inflow.

AVERAGE DISCHARGE.--54 years, 286 ft^3/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, 2,060 ft^3/s, Sept. 17, 1945; maximum gage height, 6.09 ft, Sept. 12, 1960; minimum discharge observed, 105 ft^3/s, June 5-13, 1939; minimum gage height, 1.75 ft, Mar. 13-16,18,19, 1974.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 476 ft^3/s, Nov. 25, gage height, 2.78 ft; minimum daily discharge, 199 ft^3/s, June 15,16,19; minimum gage height, 2.04 ft, June 19,20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	262	248	346	249	268	213	210	217	205	258	228	256
2	259	247	329	246	255	251	208	233	203	248	229	255
3	283	248	315	246	249	253	209	222	202	236	227	253
4	318	258	303	245	242	241	209	216	203	226	232	248
5	314	261	292	244	240	231	209	214	202	220	234	248
6	293	258	284	241	235	226	211	213	201	215	230	250
7	281	254	277	240	232	222	208	210	214	228	228	255
8	276	251	273	240	230	222	208	211	211	225	227	253
9	271	251	269	240	228	223	209	212	213	217	229	263
10	266	250	265	239	225	223	209	213	207	213	231	265
11	258	250	267	239	222	221	207	216	207	213	251	259
12	257	250	287	238	222	218	208	217	205	219	263	254
13	255	250	292	238	220	215	210	214	201	220	299	251
14	254	250	287	233	220	213	211	213	200	218	302	257
15	256	249	279	234	217	213	221	213	199	217	287	255
16	256	249	277	235	215	211	248	214	199	216	278	252
17	254	249	276	235	215	211	236	213	201	214	275	251
18	252	250	272	234	214	211	227	212	202	217	272	250
19	251	249	266	232	214	211	223	210	199	226	272	248
20	251	249	262	232	211	210	219	210	201	223	279	249
21	254	250	259	250	204	209	217	210	225	220	292	247
22	252	255	256	368	206	210	217	208	259	224	284	251
23	250	377	255	425	204	220	217	207	262	227	285	265
24	249	450	256	427	206	220	215	206	281	226	278	267
25	249	473	254	407	209	216	214	205	282	227	268	271
26	248	460	253	382	209	214	214	206	256	228	271	282
27	248	435	253	358	208	212	212	205	229	227	274	292
28	248	409	250	335	207	210	212	205	225	228	269	292
29	247	383	250	315	---	209	210	240	266	229	264	283
30	248	363	249	297	---	207	211	225	273	228	260	275
31	250	---	250	282	---	208	---	212	---	226	260	---
TOTAL	8110	8876	8503	8631	6227	6774	6439	6622	6633	6959	8078	7797
MEAN	262	296	274	278	222	219	215	214	221	224	261	260
MAX	318	473	346	427	268	253	248	240	282	258	302	292
MIN	247	247	249	232	204	207	207	205	199	213	227	247

CAL YR 1988 TOTAL 100539 MEAN 275 MAX 724 MIN 191
WTR YR 1989 TOTAL 89649 MEAN 246 MAX 473 MIN 199

ST. JOHNS RIVER BASIN ABOVE OKLAWAHA RIVER

02235192 TRACY CANAL NEAR PAISLEY, FL

LOCATION.--Lat 28°56'56", long 81°30'42", in SE¼ sec.4, T.18 S., R.28 E., Lake County, Hydrologic Unit 03080101, on left bank at downstream side of culverts on county road, 0.5 mi upstream from Lake Norris, 2.1 mi downstream from Lake Tracy, and 3.1 mi southeast of Paisley.

DRAINAGE AREA.--29.1 mi^2.

PERIOD OF RECORD.--August 1982 to September 1989 (discharge measurements only, discontinued).

REMARKS.--Discharge affected by backwater from Lake Norris.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge measured, 52 ft^3/s, Oct. 1, 1985; no flow observed in some years.

DISCHARGE MEASUREMENTS, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND
OCT			JUN		
26...	1410	.00	08.	0750	.00
DEC			AUG		
19...	0905	6.00	03 .	1032	.00
FEB			SEP		
09...	1528	11.8	26.	0940	.00
APR					
17...	1115	2.30			

ST. JOHNS RIVER BASIN ABOVE OKLAWAHA RIVER

02235200 BLACK WATER CREEK NEAR CASSIA, FL

LOCATION.--Lat 28°52'28", long 81°29'23", in SW¼ sec.35, T.18 S., R.28 E., Lake County, Hydrologic Unit 03080101, at bridge on State Highway 44, 1.5 mi southwest of Cassia, and 13 mi upstream from mouth.

DRAINAGE AREA.--126 mi^2.

PERIOD OF RECORD.--Annual maximum, water years 1962-67, 1970-80; August 1967 to September 1969, March 1981 to September 1985 (fragmentary), October 1985 to current year.

GAGE.--Water-stage recorder. Datum of gage is 18.55 ft above National Geodetic Vertical Datum of 1929 (Florida Department of Transportation bench mark). Sept. 20, 1962 to Aug. 7, 1967, and Oct. 1, 1969 to Mar. 23, 1981, crest-stage gage; Aug. 7, 1967 to Sept. 30, 1969 and Mar. 23, 1981 to June 10, 1983, water-stage recorder, and June 10, 1983 to June 10, 1985, nonrecording gage at site 1,000 ft upstream at same datum.

REMARKS.--Records good.

AVERAGE DISCHARGE.--6 years (water years 1968-69, 1986-89), 65.1 ft^3/s, 7.02 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 749 ft^3/s, Sept. 1, 1968, gage height, 9.93 ft; minimum recorded, 3.2 ft^3/s, June 11,12, 1985, gage height, 4.53 ft, but may have been less during period of no gage-height record Apr. 10 to June 9, 1985.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 77 ft^3/s, Jan. 24, gage height, 6.76 ft; minimum, 9.4 ft^3/s, June 16,17, gage height, 4.84 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	68	26	39	37	73	40	37	34	11	16	13	29
2	65	26	40	37	72	64	35	34	11	16	12	29
3	67	25	40	36	70	69	34	29	11	15	12	26
4	72	26	40	36	68	71	33	25	10	15	13	28
5	69	27	40	35	65	71	33	23	10	16	13	32
6	66	27	40	35	63	71	32	22	10	16	12	31
7	63	26	40	34	60	71	32	21	11	17	12	33
8	61	25	40	34	58	74	31	20	12	16	11	34
9	58	24	40	34	55	76	30	19	13	16	11	39
10	55	23	40	34	52	76	29	18	12	15	12	37
11	53	23	41	33	49	75	27	18	12	15	15	34
12	50	22	46	33	47	74	27	18	11	15	15	31
13	48	22	46	33	44	72	26	17	11	16	26	29
14	46	21	45	33	43	70	25	17	10	16	30	26
15	44	21	44	32	41	68	27	16	9.7	16	31	25
16	42	20	43	32	40	65	29	16	9.5	16	30	23
17	41	20	43	32	39	63	28	15	10	15	29	23
18	40	20	42	31	38	61	27	15	11	15	27	24
19	39	20	41	31	38	59	25	14	12	15	26	24
20	37	19	40	30	37	56	24	14	11	15	33	23
21	36	19	40	34	37	53	24	14	12	15	43	22
22	35	20	40	57	39	51	23	14	15	16	41	21
23	33	49	40	70	38	55	22	13	14	16	40	23
24	32	45	40	77	37	57	21	13	14	16	38	26
25	31	42	40	74	37	54	21	13	14	15	39	27
26	30	40	39	70	36	50	20	13	13	15	46	31
27	29	39	39	70	35	46	19	13	13	14	40	32
28	29	38	39	72	35	43	19	13	13	14	36	29
29	28	38	39	74	---	40	18	12	16	14	33	27
30	27	39	38	75	---	39	23	12	16	13	31	26
31	26	---	37	75	---	38	---	12	---	13	29	---
TOTAL	1420	832	1261	1420	1346	1872	801	547	358.2	473	799	844
MEAN	45.8	27.7	40.7	45.8	48.1	60.4	26.7	17.6	11.9	15.3	25.8	28.1
MAX	72	49	46	77	73	76	37	34	16	17	46	39
MIN	26	19	37	30	35	38	18	12	9.5	13	11	21
CFSM	.36	.22	.32	.36	.38	.48	.21	.14	.09	.12	.20	.22
IN.	.42	.25	.37	.42	.40	.55	.24	.16	.11	.14	.24	.25

CAL YR 1988 TOTAL 20296 MEAN 55.5 MAX 247 MIN 19 CFSM .44 IN. 5.99
WTR YR 1989 TOTAL 11973.2 MEAN 32.8 MAX 77 MIN 9.5 CFSM .26 IN. 3.53

ST. JOHNS RIVER

ST. JOHNS RIVER BASIN ABOVE OKLAWAHA RIVER

02235500 BLUE SPRINGS NEAR ORANGE CITY, FL

LOCATION.--Lat 28°56'38", long 81°20'24", in NE¼ sec.8, T.18 S., R.30 E., Volusia County, Hydrologic Unit 03080101, on left bank of Blue Springs Run, 800 ft upsteam from St. Johns River, 0.2 mi downstream from head of springs, and 2.5 mi west of Orange City.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1932 to current year (discharge measurements only).

REMARKS.--Discharge affected by backwater from St. Johns River.

AVERAGE DISCHARGE.--451 measurements, 160 ft^3/s, 103 mgd.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge measured, 214 ft^3/s, Nov. 1, 1960; minimum measured, 63 ft^3/s, Nov. 6, 1935, but may be in error due to abnormal amount of backwater from St. Johns River causing adverse measuring conditions.

WATER-QUALITY RECORDS

PERIOD OF RECORD:--Water years 1960, 1964 to current year.

DISCHARGE MEASUREMENTS AND WATER-QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	DIS-CHARGE, INST CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)
OCT 28...	1115	146	1600	400
DEC 15...	1505	151	1570	400
FEB 22...	1535	147	1650	420
APR 20...	1020	136	1660	380
JUN 07...	0955	145	1670	400
AUG 02...	1100	123	1780	540

ST. JOHNS RIVER BASIN ABOVE OKLAWAHA RIVER

02236000 ST. JOHNS RIVER NEAR DE LAND, FL
(National stream-quality accounting network station)

LOCATION.--Lat 29°00'29", long 81°22'58", in land grant 38 T.17 S., R.29 E., Lake County, Hydrologic Unit 03080101, near left bank on downstream side of Francis P Whitehair Bridge on State Highway 44, 5 mi west of De Land, and 142 mi upstream from mouth.

DRAINAGE AREA.--3,066 mi^{2}.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1933 to current year. Monthly discharge only prior to February 1934, published in WSP 1304

REVISED RECORDS.--WDR FL-75-1: Drainage area.

GAGE.--Water-stage recorder and electromagnetic current meter recorder. Datum of gage is 0.09 ft below National Geodetic Vertical Datum of 1929. Prior to May 28, 1936, nonrecording gage at site of former Crows Bluff Bridge about 1,000 ft downstream and May 28, 1936 to July 21, 1970, water-stage recorder at site 0.4 mi downstream at datum 1.11 ft lower. Oct. 1, 1959 to Sept. 30, 1975, and Oct. 1, 1984 to Mar. 21, 1986, water-stage recorder for Lake Monroe near Sanford (station 02234499) used as auxiliary gage for this station.

REMARKS.--Records poor. Flow occasionally reversed as a result of tide and wind effect.

AVERAGE DISCHARGE.--56 years, 3,067 ft^{3}/s, 13.58 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 17,100 ft^{3}/s, Oct. 15, 1953; maximum gage height, 6.06 ft, present datum, Oct. 11,12, 1953; maximum daily reverse flow, 3,030 ft^{3}/s, Aug. 23, 1957; minimum gage height since at least May 28, 1936, -0.59 ft, present datum, Apr. 2, 1945.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 4,220 ft^{3}/s, Feb. 3; maximum gage height, 2.27 ft, Oct. 9; maximum daily reverse flow, 786 ft^{3}/s, Apr. 13; minimum gage height, -0.37 ft, June 16,18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2090	792	2320	2480	4020	2710	1490	1870	565	232	1280	1600
2	2700	1300	2940	2400	4170	2590	2100	1140	1190	47	1000	1500
3	3090	2130	3100	2200	4220	2350	1970	1440	1870	195	891	1710
4	2560	2580	3290	1650	3990	2260	1810	1470	1810	503	792	1610
5	2010	2710	3310	2310	3840	2280	1560	1480	1630	1190	617	1060
6	1200	2490	2840	2320	3820	2290	767	966	1450	1280	963	1330
7	806	2560	2730	2290	3610	1820	1610	472	1630	1720	1130	1230
8	1180	2620	3100	2280	3410	978	1870	819	1420	2220	1160	924
9	1780	2590	3010	2180	2910	-91	2060	1210	1720	2350	816	1080
10	2080	2470	2850	1550	2870	98	1820	1200	1620	2230	238	1730
11	2120	2300	2990	966	3110	655	256	863	1510	1990	98	1820
12	2150	1990	2320	1090	3050	1470	-553	1160	1150	1760	392	1970
13	1640	1570	1750	1520	3260	1800	-786	1280	954	1440	1140	1800
14	2080	1660	2610	1760	3280	2000	-46	1180	1010	1600	1130	1930
15	2290	1600	2910	1940	3210	2100	1130	950	1470	1610	1120	2040
16	2450	1800	2970	2120	3180	2190	1620	913	1480	1490	1510	2110
17	2670	1670	2690	2020	2890	2140	1580	894	1230	1360	1830	2050
18	2740	1730	2640	2020	2100	2000	1560	838	841	1470	2050	1720
19	2700	1560	3030	2140	1710	1890	1710	880	743	1480	2110	1390
20	2310	1400	3130	2110	2050	1760	1590	657	647	1420	1920	917
21	1840	1200	3140	1470	2450	2120	396	685	495	1280	1940	-208
22	1940	970	3070	203	1880	2210	375	890	475	899	2080	1510
23	2000	977	2980	272	910	1830	925	996	497	831	2360	2620
24	1990	1210	2860	1920	2080	1040	1690	1140	611	635	2210	2810
25	2010	1760	2820	2440	2790	1130	1800	1330	843	510	1790	2240
26	2260	2130	2710	2870	2810	1640	1930	1380	693	566	2440	1940
27	2240	2540	2610	3240	2900	1910	2050	1370	563	645	2230	2160
28	2310	2340	2580	3460	2870	1920	1830	1140	831	963	2130	1710
29	2360	2170	2630	3420	---	1830	1760	293	897	1300	2070	846
30	2010	2450	2620	3700	---	1860	1520	232	252	1510	1900	1430
31	1550	---	2580	3880	---	1850	---	355	---	1470	1790	---
TOTAL	65156	57269	87130	66221	83390	54630	39394	31493	32097	38196	45127	48579
MEAN	2102	1909	2811	2136	2978	1762	1313	1016	1070	1232	1456	1619
MAX	3090	2710	3310	3880	4220	2710	2100	1870	1870	2350	2440	2810
MIN	806	792	1750	203	910	-91	-786	232	252	47	98	-208
CFSM	.69	.62	.92	.70	.97	.57	.43	.33	.35	.40	.47	.53
IN.	.79	.69	1.06	.80	1.01	.66	.48	.38	.39	.46	.55	.59

CAL YR 1988 TOTAL 984007 MEAN 2689 MAX 5430 MIN 673 CFSM .88 IN. 11.94
WTR YR 1989 TOTAL 648682 MEAN 1777 MAX 4220 MIN -786 CFSM .58 IN. 7.87

NOTE.--Negative figures indicate reverse flow.

ST. JOHNS RIVER BASIN ABOVE OKLAWAHA RIVER

02236000 ST. JOHNS RIVER NEAR DE LAND, FL--Continued
(National stream-quality accounting network station)

GAGE HEIGHT, IN FEET ABOVE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.90	1.63	1.58	.84	1.38	.49	.41	.38	.59	.63	.31	1.02
2	1.87	1.64	1.58	.82	1.29	.68	.34	.39	.50	.80	.34	1.08
3	1.88	1.57	1.55	.80	1.19	.84	.30	.41	.37	.87	.37	1.04
4	1.87	1.50	1.46	.84	1.11	.95	.27	.39	.29	.88	.44	1.02
5	1.85	1.41	1.39	.77	1.05	.96	.30	.35	.22	.84	.51	1.14
6	1.91	1.32	1.43	.71	1.03	.90	.35	.35	.17	.84	.49	1.21
7	2.03	1.20	1.44	.65	1.06	.91	.25	.39	.09	.77	.43	1.25
8	2.16	1.05	1.41	.61	1.10	1.03	.20	.42	.04	.60	.40	1.32
9	2.25	.95	1.37	.59	1.21	1.32	.08	.39	-.04	.44	.49	1.45
10	2.25	.88	1.36	.65	1.23	1.49	.07	.34	-.11	.33	.70	1.49
11	2.22	.85	1.41	.81	1.19	1.60	.23	.33	-.16	.27	.90	1.49
12	2.16	.85	1.60	.92	1.13	1.62	.50	.31	-.13	.23	.98	1.48
13	2.10	.94	1.77	.93	1.02	1.56	.72	.30	-.12	.22	1.05	1.47
14	2.11	.98	1.77	.92	.93	1.47	.83	.29	-.12	.18	1.10	1.47
15	2.08	.96	1.71	.89	.82	1.36	.80	.30	-.22	.10	1.13	1.46
16	2.03	.93	1.63	.83	.73	1.22	.77	.31	-.30	.08	1.09	1.40
17	1.97	.92	1.58	.77	.71	1.08	.74	.33	-.31	.08	1.03	1.39
18	1.90	.93	1.58	.72	.92	1.01	.70	.35	-.29	.07	1.00	1.38
19	1.82	.93	1.49	.67	1.13	.94	.64	.35	-.24	.10	1.01	1.41
20	1.75	.94	1.40	.60	1.21	.92	.59	.37	-.19	.10	1.08	1.47
21	1.72	.94	1.31	.72	1.17	.89	.71	.39	-.12	.14	1.15	1.49
22	1.76	1.00	1.23	1.22	1.19	.84	.82	.42	.0	.24	1.12	1.47
23	1.75	1.49	1.17	1.63	1.18	.85	.85	.37	.07	.32	1.05	1.44
24	1.70	1.68	1.14	1.77	1.07	.98	.76	.32	.15	.39	.93	1.39
25	1.69	1.72	1.11	1.81	.93	1.05	.67	.25	.19	.45	.84	1.47
26	1.67	1.73	1.07	1.80	.82	1.01	.58	.23	.22	.49	.84	1.58
27	1.60	1.70	1.07	1.74	.70	.93	.47	.21	.26	.53	.89	1.63
28	1.56	1.68	1.07	1.67	.55	.84	.39	.19	.27	.50	.95	1.69
29	1.51	1.66	1.00	1.61	---	.69	.38	.37	.32	.43	.99	1.83
30	1.47	1.60	.91	1.56	---	.50	.42	.57	.48	.37	1.00	1.89
31	1.52	---	.87	1.49	---	.37	---	.62	---	.33	1.00	---
MEAN	1.87	1.25	1.37	1.04	1.04	1.01	.50	.35	.06	.41	.83	1.41
MAX	2.25	1.73	1.77	1.81	1.38	1.62	.85	.62	.59	.88	1.15	1.89
MIN	1.47	.85	.87	.59	.55	.37	.07	.19	-.31	.07	.31	1.02

CAL YR 1988 MEAN 1.22 MAX 2.25 MIN .00
WTR YR 1989 MEAN .93 MAX 2.25 MIN -.31

ST. JOHNS RIVER BASIN ABOVE OKLAWAHA RIVER

02236000 ST. JOHNS RIVER NEAR DE LAND, FL--Continued
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1948-49, 1954, 1962, 1966 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: November 1985 to current year.
WATER TEMPERATURE: November 1985 to current year.

INSTRUMENTATION.--Water-quality monitor since November 1985. Digital recorder set for 60-minute interval.

REMARKS.--Interruption of data due to recorder and sensor malfunctions

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum observed, 1,510 microsiemens, Sept. 7, 1989; minimum daily mean, 407 microsiemens, June 7, 1986.
WATER TEMPERATURE: Maximum daily mean,(water years 1986, 1988-89), 31.5°C, July 17, 1986; minimum daily mean (water years 1986-87), 11.5°C, Jan. 29, 1986.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum observed, 1,510 microsiemens (more than 20 percent missing record), Sept. 7.
WATER TEMPERATURE: Maximum daily mean (more than 20 percent missing record), 31.4°C, July 11.

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	711	---	---	865	898	996	1080	1160	---	---	---	---
2	703	---	---	838	903	985	1080	1170	---	---	---	---
3	722	---	---	804	904	973	1050	1160	---	---	---	---
4	739	---	---	826	880	983	1090	1200	---	---	---	---
5	722	---	---	915	848	978	1100	1240	---	---	---	---
6	728	---	874	843	852	986	1100	1100	---	---	---	---
7	743	---	909	829	877	998	1110	1130	1160	---	1440	---
8	749	---	909	811	872	1010	1160	1160	---	---	1350	---
9	743	---	909	824	---	980	1040	1130	---	---	1230	---
10	832	---	908	870	---	983	1100	1150	---	---	1260	---
11	768	---	911	907	---	949	1120	1180	---	---	---	---
12	708	---	909	909	---	985	1070	1160	---	---	---	---
13	721	---	906	886	---	1070	1090	1160	---	---	---	---
14	755	---	910	971	---	1040	1130	1200	---	---	1430	---
15	756	---	805	1070	---	966	1130	1160	---	---	---	---
16	738	---	845	900	---	974	1130	1130	---	---	---	---
17	759	---	---	851	---	992	1190	1200	---	---	---	---
18	790	---	---	864	---	1010	1050	---	---	---	---	---
19	812	---	730	913	---	1030	1030	1180	---	---	---	---
20	814	---	835	908	---	1040	1060	1220	---	1290	---	---
21	830	---	826	916	---	1040	1060	---	---	---	---	---
22	---	---	827	881	974	1040	1050	---	---	---	---	---
23	---	---	823	864	972	1030	1060	---	---	---	---	---
24	---	---	831	815	971	1040	1080	---	---	---	1060	---
25	---	---	842	930	1030	1040	1060	---	---	---	---	---
26	---	---	845	861	943	1090	1030	---	---	---	---	---
27	---	---	841	835	976	1060	1000	---	---	---	---	---
28	900	---	844	847	987	977	1080	---	---	1360	---	---
29	---	---	852	855	---	1030	1120	---	---	---	---	---
30	---	---	864	821	---	1060	1140	---	---	---	---	---
31	---	---	864	844	---	1070	---	1040	---	---	---	---
MEAN	---	---	---	873	---	1010	1090	---	---	---	---	---
MAX	---	---	---	1070	---	1090	1190	---	---	---	---	---
MIN	---	---	---	804	---	949	1000	---	---	---	---	---

02236000 ST. JOHNS RIVER NEAR DE LAND, FL--Continued
(National stream-quality accounting network station)

TEMPERATURE, (DEG C), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28.2	---	---	---	---	17.3	25.2	---	29.8	29.6	30.6	30.6
2	27.6	---	---	---	---	18.0	24.2	---	29.9	29.8	30.3	30.5
3	27.6	---	---	---	---	18.4	24.2	---	29.3	29.9	30.5	30.6
4	23.0	---	---	---	---	20.5	21.8	---	29.3	30.2	30.6	30.3
5	24.0	---	---	---	---	21.5	23.6	---	30.0	30.4	30.7	30.0
6	23.5	---	---	---	---	20.7	20.6	---	29.9	30.6	31.1	29.6
7	23.5	---	16.9	---	---	19.4	20.4	---	29.2	29.8	30.9	29.4
8	---	---	17.5	---	---	21.2	19.7	---	28.8	29.9	30.5	29.1
9	---	---	17.9	---	---	19.5	22.7	---	28.4	30.7	30.1	29.2
10	---	---	18.6	---	---	18.1	23.3	---	28.7	31.1	30.1	28.8
11	21.6	---	18.6	---	---	17.4	23.6	---	29.2	31.4	30.4	28.4
12	23.1	---	18.1	---	---	18.1	21.9	17.8	29.7	31.1	30.3	28.4
13	23.0	---	17.2	---	---	18.3	21.5	---	29.8	31.0	30.1	28.4
14	---	---	16.3	---	---	17.1	20.0	---	30.2	30.6	29.2	28.5
15	---	---	16.1	---	---	19.0	18.1	---	30.3	30.3	28.9	28.9
16	---	---	15.6	---	---	20.4	18.9	---	30.4	30.7	28.8	29.4
17	---	---	---	---	---	21.0	22.4	---	30.6	30.7	28.7	29.4
18	---	---	---	---	---	22.6	23.6	---	30.6	30.3	29.2	29.3
19	---	---	---	---	---	23.1	23.6	19.4	30.5	29.7	29.2	28.9
20	---	---	---	---	---	24.4	24 0	---	30.4	30.0	29.2	28.8
21	---	---	---	---	---	24.6	24.2	---	30.3	30.1	28.9	28.7
22	---	---	---	---	---	24.6	---	---	30.0	29.9	29.0	28.4
23	---	---	---	---	21.0	24.9	---	---	29.9	30.0	29.3	27.7
24	---	---	---	---	18.8	24.1	---	---	29.6	30.0	30.0	27.5
25	---	---	---	---	17.3	---	---	---	29.5	29.9	30.5	27.4
26	---	---	---	---	16.5	21 5	---	---	29.3	30.1	30.4	27.2
27	---	---	---	---	15.9	21.3	---	---	29.2	30.3	30.3	27.2
28	---	---	---	---	16.2	24.9	---	---	29.5	30.2	30.1	27.4
29	---	---	---	---	---	25.8	---	---	29.4	30.3	29.9	27.4
30	---	---	---	---	---	25.7	---	---	29.3	30.0	30.0	27.9
31	---	---	---	---	---	25.1	---	29.7	---	30.4	30.4	---
MEAN	---	---	---	---	---	---	---	---	29.7	30.3	29.9	28.8
MAX	---	---	---	---	---	---	---	---	30.6	31.4	31.1	30.6
MIN	---	---	---	---	---	---	---	---	28.4	29.6	28.7	27.2

ST. JOHNS RIVER

ST. JOHNS RIVER BASIN ABOVE OKLAWAHA RIVER

02236000 ST. JOHNS RIVER NEAR DE LAND, FL--Continued
(National stream-quality accounting network station)

WATER-QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	GAGE HEIGHT (FEET) (00065)	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	OXYGEN, DIS-SOLVED (MG/L) (00300)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)
DEC										
06...	0800	1.43	2880	874	7.5	16.0	7.1	--	--	160
MAR										
15...	1200	1.34	2210	975	7.5	19.5	6.8	E28	E11	200
APR										
11...	1419	0.25	-237	1130	7.8	23.5	6.4	61	E44	190
MAY										
31...	1419	0.59	346	1040	8.3	30.5	8.9	55	E18	220
JUL										
20...	1240	0.11	1580	1290	8.6	30.5	9.4	790	140	240
SEP										
07...	1305	1.23	1490	1510	--	30.5	7.9	E20	E2	250

DATE	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)
DEC										
06...	38	17	120	5.1	64	56	230	0.20	3.8	564
MAR										
15...	49	18	110	4.5	79	74	200	0.20	5.1	549
APR										
11...	46	19	130	5.5	78	76	260	0.10	2.2	625
MAY										
31...	55	20	120	4.3	133	72	210	0.20	5.4	575
JUL										
20...	56	23	160	6.2	105	93	300	0.10	7.4	753
SEP										
07...	57	26	190	7.8	71	100	350	0.10	6.2	800

DATE	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS-PHOROUS TOTAL (MG/L AS P) (00665)	PHOS-PHOROUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHOROUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)	SEDI-MENT, SUS-PENDED (MG/L) (80154)
DEC										
06...	0.010	0.210	0.030	0.040	1.1	0.080	0.050	0.040	89	9
MAR										
15...	<0.010	0.250	0.030	0.020	0.90	0.120	0.080	0.080	80	5
APR										
11...	<0.010	0.120	0.030	0.020	1.0	0.130	0.060	0.040	82	11
MAY										
31...	<0.010	<0.100	0.030	0.010	1.3	0.130	0.130	0.060	--	--
JUL										
20...	<0.010	<0.100	0.010	0.020	1.5	0.120	0.030	0.020	100	7
SEP										
07...	<0.010	<0.100	0.040	0.030	1.3	0.100	0.020	0.020	--	--

ST. JOHNS RIVER BASIN ABOVE OKLAWAHA RIVER

02236000 ST. JOHNS RIVER NEAR DE LAND, FL--Continued
(National stream-quality accounting network station)

WATER-QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	ALUMINUM, DIS- SOLVED (UG/L AS AL) (01106)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYLLIUM, DIS- SOLVED (UG/L AS BE) (01010)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHROMIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)
MAR										
15...	20	<1	17	<0.5	<1	<1	<3	<1	<5	10
MAY										
31...	20	<1	18	<0.5	<1	<1	<3	1	2	5
JUL										
20...	20	1	24	<0.5	<1	<1	<3	1	<1	7
SEP										
07...	30	<1	29	<0.5	1	2	<3	4	4	8

DATE	MANGANESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	MOLYBDENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELENIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRONTIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANADIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
MAR									
15...	5	0.2	<10	3	<1	<1.0	860	<6	7
MAY									
31...	1	4.7	<10	<1	<1	<1.0	910	<6	7
JUL									
20...	<1	<0.1	<10	<1	<1	<1.0	1200	<6	13
SEP									
07...	1	0.2	<10	1	<1	<1.0	1400	<6	15

ST. JOHNS RIVER

ST. JOHNS RIVER BASIN ABOVE OKLAWAHA RIVER

02236120 DEEP CREEK NEAR BARBERVILLE, FL

LOCATION.--Lat 29°09'47", long 81°23'27", in SW¼ sec.27, T 15 S., R.29 E., Volusia County, Hydrologic Unit 03080101, on downstream side of bridge on U.S. Highway 17, 2.1 mi upstream from mouth, and 2.5 mi southeast of Barberville.

DRAINAGE AREA.--35.4 mi.

PERIOD OF RECORD.--October 1964 to September 1971 (annual peak discharge and periodic discharge measurements only), October 1971 to September 1982 (annual peak discharge only), October 1982 to current year (annual peak discharge and periodic discharge measurements only). Converted to periodic discharge site Oct 1, 1989

REVISED RECORDS.--WDR FL-88-1: Drainage area.

GAGE.--Nonrecording gage and crest-stage gage. Datum of gage is 2.49 ft below National Geodetic Vertical Datum of 1929.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,100 ft^3/s Aug. 29, 1968, gage height 11.23 ft; maximum discharge measured, 837 ft^3/s Oct. 19, 1968; no flow observed in 1967, 1968, 1970, 1989.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, <81 ft^3/s; maximum gage height, <7.53 ft.

DISCHARGE MEASUREMENTS, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND
OCT			JUN		
26...	1000	.31	06...	1345	.00
DEC			JUL		
13...	1422	13.3	31...	1442	.14
FEB			SEP		
16...	1250	6.88	28...	0920	1.93
APR					
14...	1245	.40			

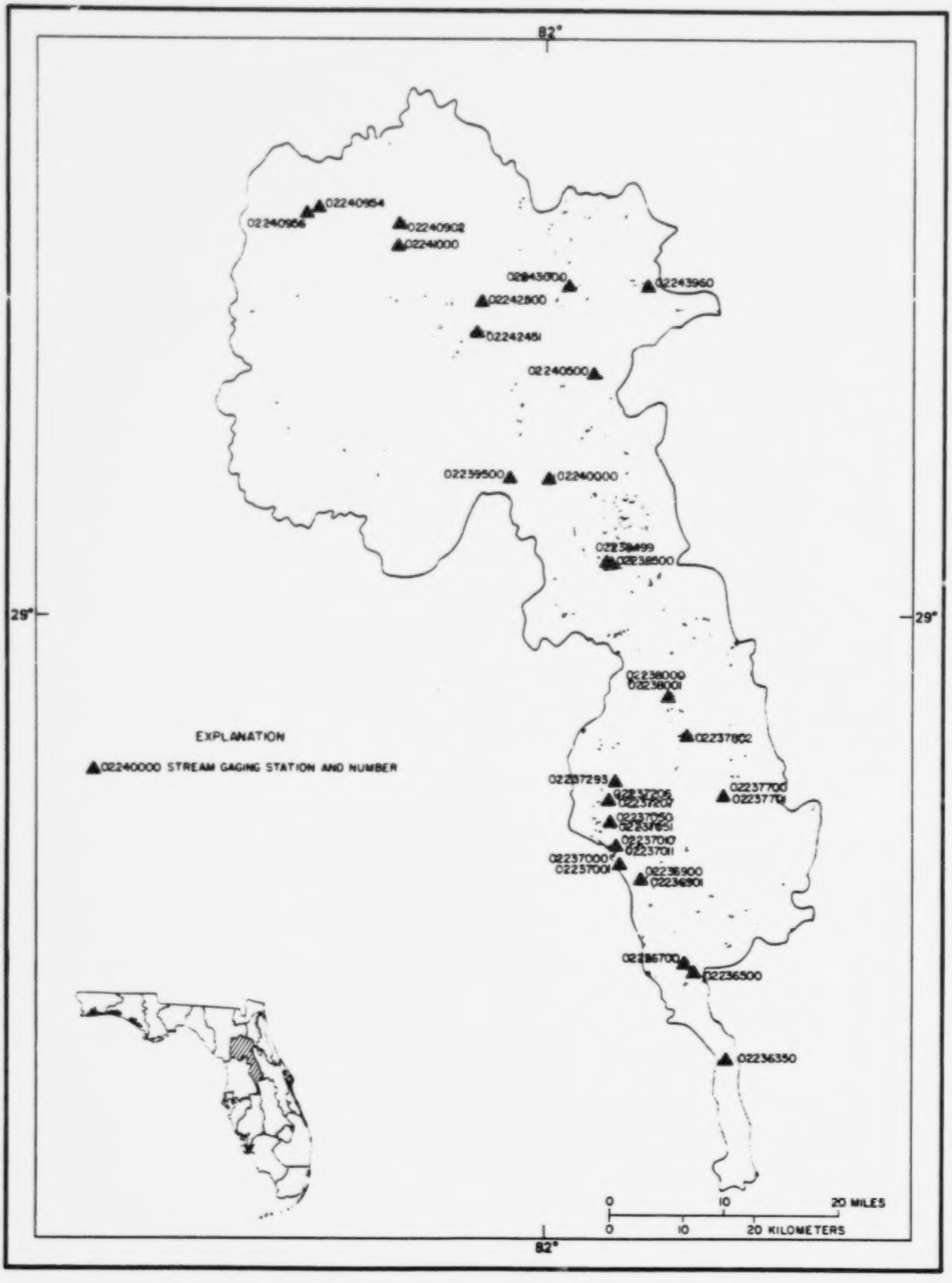

82°
02240954
02240956
02240902
02241000
02243000
02243960
02242800
02242451
02240800
02239500
02240000
02238499
02238500
29°
29°
02238000
02238001
02237802
02237293
02237205
02237207
02237700
02237701
02237050
02237051
02237010
02237011
02237000
02237001
02236900
02236901
02236700
02236500
02236350
EXPLANATION
▲02240000 STREAM GAGING STATION AND NUMBER
0
10
20 MILES
0
10
20 KILOMETERS
82°

Figure 16.--Location of stream gaging stations in the Oklawaha River basin.

ST. JOHNS RIVER

OKLAWAHA RIVER BASIN

02236350 GREEN SWAMP RUN NEAR EVA, FL

LOCATION.--Lat 28°18'39", long 81°41'08", in NW¼ sec.14, T.25 S., R.26 E., Polk County, Hydrologic Unit 03080102, on left bank, 20 ft downstream from culverts on Sand Mine Road, 1.1 mi west of U.S. Highway 27, 9.1 mi east of Eva, and 12.8 mi upstream from mouth.

DRAINAGE AREA.--43 mi^2, approximately.

PERIOD OF RECORD.--July 1979 to current year.

GAGE.--Water-stage recorder. Datum of gage is 116.16 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair.

AVERAGE DISCHARGE.--10 years, 10.2 ft^3/s, 3.22 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 109 ft^3/s, Mar. 31, Apr. 1, 1987, gage height, 5.41 ft; maximum gage height, 5.78 ft, Apr. 9, 1984; no flow for many days most years, creek dry at gage for many days during 1981

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 12 ft^3/s, Dec. 12,13,14; maximum gage height, 4.21 ft, Dec. 12,13; no flow for many days; creek dry at gage for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.02	.00	4.0	1.1	2.1	1.1	.18	.00	.00	.00	.00	.00
2	.01	.00	3.7	1.1	2.0	1.3	.13	.00	.00	.00	.00	.00
3	.04	.00	3.3	1.1	2.0	1.3	.09	.00	.00	.00	.00	.00
4	.13	.00	3.0	1.1	2.0	1.3	.07	.00	.00	.00	.00	.00
5	.11	.01	2.6	1.0	1.9	1.3	.07	.00	.00	.00	.00	.00
6	.07	.01	2.3	1.0	1.9	1.2	.05	.00	.00	.00	.00	.00
7	.04	.01	2.1	.97	1.9	1.2	.03	.00	.00	.00	.00	.00
8	.02	.01	1.8	.95	1.9	1.2	.02	.00	.00	.00	.00	.00
9	.01	.01	1.6	.94	1.9	1.2	.02	.00	.00	.00	.00	.00
10	.01	.01	1.5	.91	1.8	1.1	.01	.00	.00	.00	.00	.00
11	.00	.01	3.4	.90	1.7	1.1	.01	.00	.00	.00	.00	.00
12	.00	.01	12	.90	1.7	1.0	.01	.00	.00	.00	.00	.00
13	.00	.01	12	.87	1.7	.96	.01	.00	.00	.00	.00	.00
14	.00	.01	7.0	.84	1.6	.91	.01	.00	.00	.00	.00	.00
15	.00	.01	2.3	.81	1.6	.85	.02	.00	.00	.00	.00	.00
16	.00	.00	1.9	.80	1.6	.81	.03	.00	.00	.00	.00	.00
17	.00	.00	1.8	.78	1.5	.75	.03	.00	.00	.00	.00	.00
18	.00	.00	1.6	.75	1.5	.72	.02	.00	.00	.00	.00	.00
19	.00	.00	1.5	.73	1.5	.66	.01	.00	.00	.00	.00	.00
20	.00	.00	1.5	.72	1.4	.61	.01	.00	.00	.00	.00	.00
21	.00	.00	1.4	1.0	1.4	.55	.01	.00	.00	.00	.00	.00
22	.00	.02	1.4	2.5	1.4	.50	.01	.00	.00	.00	.00	.00
23	.00	2.6	1.3	2.3	1.3	.47	.01	.00	.00	.00	.00	.00
24	.00	1.6	1.3	2.2	1.2	.45	.00	.00	.00	.00	.00	.00
25	.00	1.4	1.3	2.2	1.2	.40	.00	.00	.00	.00	.00	.00
26	.00	1.6	1.2	2.1	1.1	.35	.00	.00	.00	.00	.00	.00
27	.00	2.0	1.2	2.1	1.1	.30	.00	.00	.00	.00	.00	.00
28	.00	3.0	1.2	2.1	1.1	.26	.00	.00	.00	.00	.00	.00
29	.00	3.8	1.2	2.1	---	.22	.00	.00	.00	.00	.00	.00
30	.00	3.9	1.2	2.1	---	.26	.00	.00	.00	.00	.00	.00
31	.00	---	1.1	2.1	---	.23	---	.00	---	.00	.00	---
TOTAL	0.46	20.03	84.7	41.07	45.0	24.56	0.86	0.00	0.00	0.00	0.00	0.00
MEAN	.015	.67	2.73	1.32	1.61	.79	.029	.00	.00	.00	.00	.00
MAX	.13	3.9	12	2.5	2.1	1.3	.18	.00	.00	.00	.00	.00
MIN	.00	.00	1.1	.72	1.1	.22	.00	.00	.00	.00	.00	.00
CFSM	.00	.02	.06	.03	.04	.02	.00	.00	.00	.00	.00	.00
IN.	.00	.02	.07	.04	.04	.02	.00	.00	.00	.00	.00	.00

CAL YR 1988 TOTAL 1274.81 MEAN 3.48 MAX 62 MIN .00 CFSM .08 IN. 1.10
WTR YR 1989 TOTAL 216.68 MEAN .59 MAX 12 MIN .00 CFSM .01 IN. .19

ST. JOHNS RIVER

OKLAWAHA RIVER BASIN

02236500 BIG CREEK NEAR CLERMONT, FL

LOCATION.--Lat 28°26'51", long 81°44'25", in NE¼ sec.31, T.23 S., R.26 E., Lake County, Hydrologic Unit 03080102, near left bank 40 ft downstream from log bridge, 1 mi upstream from mouth at Lake Louisa, and 7.5 mi southeast of Clermont.

DRAINAGE AREA.--68 mi^2, approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1958 to current year.

GAGE.--Water-stage recorder. Datum of gage is 98.97 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Some interconnection at high stages with Little Creek and Withlacoochee River basin.

AVERAGE DISCHARGE.--31 years (water years 1959-89), 25.4 ft^3/s, 5.07 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 691 ft^3/s, Sept. 13, 1960, gage height, 6.23 ft; no flow for many days in some years; creek dry at gage for many days in 1981.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 81 ft^3/s, Nov. 28,29, gage height, 4.36 ft; no flow part of each day June 15,16; minimum gage height, 0.71 ft, June 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.2	.46	70	15	36	8.8	4.6	4.0	.09	2.9	20	20
2	4.7	.43	64	15	33	12	4.1	5.0	.06	3.2	20	25
3	7.8	.38	57	14	31	14	3.7	4.3	.03	3.7	19	25
4	8.7	1.0	51	14	29	15	3.8	3.5	.02	8.0	17	23
5	8.0	1.4	45	13	27	15	8.4	2.9	.06	7.6	15	19
6	7.1	1.6	41	12	25	15	8.9	2.3	.07	7.5	13	16
7	6.2	1.4	37	12	24	15	8.6	1.8	.08	7.3	11	14
8	5.4	1.2	34	11	22	16	8.0	1.3	.14	6.5	10	12
9	4.6	1.1	32	11	21	16	7.4	1.1	.36	5.7	8.9	10
10	4.1	1.0	29	11	19	16	6.7	.91	.18	5.1	7.9	8.8
11	3.7	.96	31	10	18	16	6.2	.93	.11	5.0	7.5	7.6
12	3.3	.84	37	9.9	17	15	5.6	.68	.07	5.6	18	6.5
13	2.9	.79	34	9.6	16	15	5.1	.54	.05	6.1	24	5.6
14	2.6	.74	32	9.3	17	14	4.6	.46	.03	7.1	23	4.8
15	2.3	.65	31	9.0	17	13	5.1	.38	.01	7.6	19	4.4
16	2.0	.60	30	8.7	16	12	5.5	.29	.01	8.6	16	4.2
17	1.8	.58	28	8.4	15	12	5.3	.23	.04	9.8	13	3.5
18	1.7	.56	26	8.1	14	11	4.8	.18	.05	11	11	3.2
19	1.5	.52	24	7.8	14	9.9	4.5	.15	.06	12	9.1	3.2
20	1.3	.49	23	7.6	13	9.3	4.9	.13	.04	12	8.1	2.9
21	1.2	.50	23	11	12	8.6	4.5	.10	.23	11	7.4	2.6
22	1.1	.88	22	34	12	7.9	4.0	.10	2.3	11	6.5	2.7
23	.95	56	21	43	12	7.5	3.5	.09	1.5	13	5.6	6.6
24	.86	75	20	47	11	7.2	3.1	.08	1.4	12	4.7	7.7
25	.80	77	20	48	10	6.8	2.6	.06	1.7	12	4.0	9.2
26	.71	78	19	48	9.7	6.4	2.2	.05	1.2	10	3.6	13
27	.64	78	18	48	9.3	6.0	1.8	.04	.88	9.0	3.4	15
28	.58	80	17	46	9.0	5.5	1.5	.04	.62	7.7	3.0	14
29	.53	79	17	44	---	5.1	1.3	.07	.57	6.7	3.6	14
30	.50	76	16	41	---	4.9	1.6	.08	.83	12	3.8	13
31	.48	---	16	39	---	4.7	---	.13	---	16	4.0	---
TOTAL	93.25	617.08	965	665.4	509.0	340.6	141.9	31.92	12.79	262.7	340.1	316.5
MEAN	3.01	20.6	31.1	21.5	18.2	11.0	4.73	1.03	.43	8.47	11.0	10.5
MAX	8.7	80	70	48	36	16	8.9	5.0	2.3	16	24	25
MIN	.48	.38	16	7.6	9.0	4.7	1.3	.04	.01	2.9	3.0	2.6
CFSM	.04	.30	.46	.32	.27	.16	.07	.02	.01	.12	.16	.16
IN.	.05	.34	.53	.36	.28	.19	.08	.02	.01	.14	.19	.17

CAL YR 1988 TOTAL 5990.90 MEAN 16.4 MAX 102 MIN .18 CFSM .24 IN. 3.28
WTR YR 1989 TOTAL 4296.24 MEAN 11.8 MAX 80 MIN .01 CFSM .17 IN. 2.35

ST. JOHNS RIVER

OKLAWAHA RIVER BASIN

02236500 BIG CREEK NEAR CLERMONT, FL--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1956, 1958-61, 1963, 1966-77, 1979 to November 1988 (discontinued).

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: January 1982 to November 1988.
WATER TEMPERATURE: January 1982 to November 1988.
DISSOLVED OXYGEN: January 1982 to September 1988.

INSTRUMENTATION.--Water-quality monitor since January 1982. Digital recorder set for 60-minute interval.

REMARKS.--Water quality daily records prior to October 1984 are unpublished and available in files of the Orlando Subdistrict office.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily mean, 225 microsiemens, Jan. 6,7, 1982; minimum daily mean, 42 microsiemens, Sept. 26,27, 1984.
WATER TEMPERATURE: Maximum daily mean, 28.5°C, July 10, Aug. 8,9, 1987; minimum daily mean, 5.5°C, Jan. 22, 1985.
DISSOLVED OXYGEN: Maximum daily mean, 8.9 mg/L, Jan. 9, 1985; minimum daily mean, 1.6 mg/L, May 23, 1982, July 12, 1985.

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), PERIOD OCTOBER TO NOVEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	95	90	---	---	---	---	---	---	---	---	---	---
2	93	89	---	---	---	---	---	---	---	---	---	---
3	93	89	---	---	---	---	---	---	---	---	---	---
4	92	91	---	---	---	---	---	---	---	---	---	---
5	93	98	---	---	---	---	---	---	---	---	---	---
6	93	106	---	---	---	---	---	---	---	---	---	---
7	94	106	---	---	---	---	---	---	---	---	---	---
8	95	101	---	---	---	---	---	---	---	---	---	---
9	94	97	---	---	---	---	---	---	---	---	---	---
10	94	95	---	---	---	---	---	---	---	---	---	---
11	94	94	---	---	---	---	---	---	---	---	---	---
12	93	94	---	---	---	---	---	---	---	---	---	---
13	93	93	---	---	---	---	---	---	---	---	---	---
14	92	93	---	---	---	---	---	---	---	---	---	---
15	92	92	---	---	---	---	---	---	---	---	---	---
16	92	92	---	---	---	---	---	---	---	---	---	---
17	92	92	---	---	---	---	---	---	---	---	---	---
18	94	93	---	---	---	---	---	---	---	---	---	---
19	93	92	---	---	---	---	---	---	---	---	---	---
20	93	92	---	---	---	---	---	---	---	---	---	---
21	93	92	---	---	---	---	---	---	---	---	---	---
22	93	92	---	---	---	---	---	---	---	---	---	---
23	93	68	---	---	---	---	---	---	---	---	---	---
24	92	75	---	---	---	---	---	---	---	---	---	---
25	91	82	---	---	---	---	---	---	---	---	---	---
26	94	85	---	---	---	---	---	---	---	---	---	---
27	90	86	---	---	---	---	---	---	---	---	---	---
28	93	---	---	---	---	---	---	---	---	---	---	---
29	90	---	---	---	---	---	---	---	---	---	---	---
30	90	---	---	---	---	---	---	---	---	---	---	---
31	90	---	---	---	---	---	---	---	---	---	---	---

02236500 BIG CREEK NEAR CLERMONT, FL--Continued

TEMPERATURE, WATER (DEG. C), PERIOD OCTOBER TO NOVEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24.6	21.1	---	---	---	---	---	---	---	---	---	---
2	24.5	19.0	---	---	---	---	---	---	---	---	---	---
3	24.5	17.6	---	---	---	---	---	---	---	---	---	---
4	24.2	19.6	---	---	---	---	---	---	---	---	---	---
5	24.3	20.9	---	---	---	---	---	---	---	---	---	---
6	23.7	20.0	---	---	---	---	---	---	---	---	---	---
7	22.6	18.2	---	---	---	---	---	---	---	---	---	---
8	21.0	17.3	---	---	---	---	---	---	---	---	---	---
9	20.6	17.4	---	---	---	---	---	---	---	---	---	---
10	20.9	18.3	---	---	---	---	---	---	---	---	---	---
11	20.3	18.7	---	---	---	---	---	---	---	---	---	---
12	19.8	19.4	---	---	---	---	---	---	---	---	---	---
13	19.8	20.0	---	---	---	---	---	---	---	---	---	---
14	19.3	20.0	---	---	---	---	---	---	---	---	---	---
15	19.5	19.8	---	---	---	---	---	---	---	---	---	---
16	20.2	20.5	---	---	---	---	---	---	---	---	---	---
17	20.8	21.2	---	---	---	---	---	---	---	---	---	---
18	21.4	21.9	---	---	---	---	---	---	---	---	---	---
19	22.0	21.8	---	---	---	---	---	---	---	---	---	---
20	21.4	21.8	---	---	---	---	---	---	---	---	---	---
21	21.6	22.0	---	---	---	---	---	---	---	---	---	---
22	21.2	21.7	---	---	---	---	---	---	---	---	---	---
23	19.3	20.7	---	---	---	---	---	---	---	---	---	---
24	19.1	19.4	---	---	---	---	---	---	---	---	---	---
25	19.4	18.6	---	---	---	---	---	---	---	---	---	---
26	18.8	19.0	---	---	---	---	---	---	---	---	---	---
27	19.7	20.1	---	---	---	---	---	---	---	---	---	---
28	20.5	---	---	---	---	---	---	---	---	---	---	---
29	20.7	---	---	---	---	---	---	---	---	---	---	---
30	20.8	---	---	---	---	---	---	---	---	---	---	---
31	21.2	---	---	---	---	---	---	---	---	---	---	---

ST. JOHNS RIVER

OKLAWAHA RIVER BASIN

02236700 LITTLE CREEK NEAR CLERMONT, FL

LOCATION.--Lat 28°27'39", long 81°45'26", in NE¼ sec.25, T.23 S., R.25 E., Lake County, Hydrologic Unit 03080102, at downstream side of culverts on Lake Nellie Road, 0.6 mi upstream from Lake Louisa, 2.3 mi east of State Highway 561, and 6.1 mi south of Clermont.

DRAINAGE AREA.--14.7 mi^2.

PERIOD OF RECORD.--Occasional discharge measurements, water years 1945-47, 1952-56, 1966, 1967; periodic discharge measurements and gage heights, water years 1958-60. July 1979 to current year.

GAGE.--Water-stage recorder. Datum of gage is 90.08 ft above National Geodetic Vertical Datum of 1929. July 18, 1958 to July 5, 1960, nonrecording gage at same site at different datum.

REMARKS.--Records poor. Some interconnection at high stages with Big Creek is possible.

AVERAGE DISCHARGE.--10 years, 15.4 ft^3/s, 14.23 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 850 ft^3/s, Mar. 18, 1960, gage height, 10.85 ft, from flood mark; no flow for many days in most years; creek dry at gage for many days in 1981.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 98 ft^3/s, Nov. 24, gage height, 8.74 ft; no flow for many days; minimum gage height, 6.58 ft, June 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.3	.56	60	29	47	6.8	.89	2.5	.00	.22	.00	.89
2	4.7	.51	56	28	46	8.3	.79	3.3	.00	.15	.00	.43
3	6.7	.46	52	27	43	8.7	.67	2.5	.00	.07	.00	.49
4	8.1	.82	49	26	42	8.6	.96	1.9	.00	.21	.00	.72
5	6.9	1.2	47	24	40	8.4	4.1	1.4	.00	.10	.02	.94
6	6.2	1.6	45	23	38	8.4	2.9	.97	.00	.00	.03	.75
7	5.5	1.3	43	22	37	8.4	2.0	.71	.00	.00	.00	.65
8	4.7	1.1	42	21	34	8.4	1.6	.52	.00	.00	.02	.51
9	4.0	.90	41	20	33	8.1	1.2	.39	.00	.00	.11	.41
10	3.4	.78	39	19	31	7.6	.98	.30	.00	.00	.04	.36
11	3.0	.71	44	18	29	6.9	.83	.37	.00	.00	.04	.29
12	2.8	.65	54	17	27	6.3	.78	.31	.00	.00	.54	.21
13	2.4	.59	53	16	25	5.9	.69	.23	.00	.00	.41	.15
14	2.3	.56	54	16	23	5.4	.62	.22	.00	.00	.29	.08
15	1.9	.51	55	15	22	5.0	.74	.18	.00	.00	.32	.03
16	1.8	.46	55	14	21	4.6	1.1	.15	.00	.00	.32	.13
17	1.6	.41	54	13	18	4.1	1.1	.12	.00	.00	.28	.07
18	1.6	.39	51	12	17	3.8	1.1	.09	.00	.00	.23	.00
19	1.4	.35	49	11	15	3.4	.99	.04	.00	.00	.27	.00
20	1.2	.33	46	10	14	3.0	1.1	.00	.00	.00	.28	.00
21	1.1	.29	44	18	13	2.6	.99	.00	.01	.00	.30	.00
22	1.1	.52	42	56	12	2.4	.88	.00	.03	.00	.16	.00
23	1.0	54	41	69	11	2.2	.76	.00	.00	.00	.05	.11
24	.90	92	39	70	9.8	2.2	.66	.00	.00	.00	.00	.32
25	.86	96	38	70	9.0	2.1	.59	.00	.00	.00	.00	.33
26	.75	94	36	67	8.2	1.9	.53	.00	.00	.00	.02	.41
27	.68	88	35	63	7.6	1.7	.46	.00	.00	.00	.17	.32
28	.65	83	34	60	7.1	1.5	.40	.00	.00	.00	.14	.31
29	.62	73	32	56	---	1.2	.39	.00	.00	.00	.03	.24
30	.59	66	31	52	---	1.1	.56	.00	.01	.00	.00	.17
31	.59	---	31	50	---	.94	---	.00	---	.00	.09	---
TOTAL	84.34	661.00	1392	1012	679.7	149.94	31.36	16.20	0.05	0.75	4.16	9.32
MEAN	2.72	22.0	44.9	32.6	24.3	4.84	1.05	.52	.002	.024	.13	.31
MAX	8.1	96	60	70	47	8.7	4.1	3.3	.03	.22	.54	.94
MIN	.59	.29	31	10	7.1	.94	.39	.00	.00	.00	.00	.00
CFSM	.19	1.50	3.05	2.22	1.65	.33	.07	.04	.00	.00	.01	.02
IN.	.21	1.67	3.52	2.56	1.72	.38	.08	.04	.00	.00	.01	.02

CAL YR 1988 TOTAL 7359.42 MEAN 20.1 MAX 128 MIN .00 CFSM 1.37 IN. 18.62
WTR YR 1989 TOTAL 4040.82 MEAN 11.1 MAX 96 MIN .00 CFSM .75 IN. 10.23

02236900 PALATLAKAHA RIVER AT CHERRY LAKE OUTLET, NEAR GROVELAND, FL

LOCATION.--Lat 28°35'33", long 81°49'21", in NE¼ sec.8, T.22 S., R.25 E., Lake County, Hydrologic Unit 03080102, near left bank 21 ft upstream from spillway at outlet of Cherry Lake, and 3 mi northeast of Groveland.

DRAINAGE AREA.--165 mi^2.

PERIOD OF RECORD.--September 1956 to February 1957 (gage heights and discharge measurements only), March 1957 to current year.

REVISED RECORDS.--WDR FL-72-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (Gee and Jenson, Inc. bench mark). Auxiliary gage at downstream side of spillway structure.

REMARKS.--Records poor. Since 1956, flow regulated by earthen dam and concrete spillway with radial lift gates at outlet. Discharge computed from relation between discharge, head, and gate openings. An undetermined amount of water is diverted at times through a gated culvert in dam for irrigation of citrus groves. Gage heights are published as elevations for Cherry Lake (station 02236880) in the section of this report entitled LAKE ELEVATIONS.

COOPERATION.--Gate-opening record provided by Oklawaha Basin Recreation and Water Conservation and Control Authority.

AVERAGE DISCHARGE.--32 years (water years 1958-89), 36.7 ft^3/s, 3.02 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 584 ft^3/s, Apr. 5, 1960; maximum gage height, 98.15 ft, Apr. 22, 1959; maximum daily reverse flow, 5.1 ft^3/s, July 14, 1971; no flow for many days in most years; minimum gage height, 92.58 ft, Jan. 23, 1963.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 214 ft^3/s, Jan. 24; maximum gage height, 96.97 ft, Jan. 22; minimum daily discharge 2.7 ft^3/s, June 14,15,16,20; minimum gage height, 95.75 ft, June 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.8	3.2	3.9	57	116	4.0	3.8	3.8	5.3	3.4	3.4	3.3
2	3.8	3.2	3.9	57	118	4.0	3.8	3.8	20	3.4	3.4	3.4
3	3.8	3.2	3.9	57	119	4.0	3.7	3.8	20	3.5	3.3	3.4
4	3.8	3.2	3.9	56	53	4.1	3.7	3.8	20	3.5	3.3	3.4
5	3.8	3.3	4.0	56	4.0	4.1	3.9	3.8	20	3.5	3.3	3.4
6	3.8	3.3	4.0	56	4.1	4.1	3.9	3.7	20	3.5	3.2	3.5
7	3.7	3.3	4.0	56	23	4.0	3.8	3.7	20	3.5	3.2	3.5
8	3.7	3.2	4.0	57	40	4.0	3.8	3.6	20	3.5	3.2	3.5
9	3.7	3.2	4.0	56	40	4.0	3.8	3.6	20	3.4	3.2	3.5
10	3.7	3.2	4.0	56	39	3.9	3.8	3.6	20	3.4	3.1	3.5
11	3.6	3.2	4.1	56	39	3.9	3.8	3.6	20	3.4	3.1	3.4
12	3.6	3.2	4.2	56	39	3.9	3.8	3.6	20	3.5	3.1	3.4
13	3.6	3.2	4.2	56	39	3.9	3.7	3.5	13	3.5	3.2	3.4
14	3.5	3.1	4.2	56	39	3.9	3.7	3.5	2.7	3.5	3.2	3.4
15	3.5	3.1	4.2	56	40	3.9	3.9	3.5	2.7	3.5	3.2	3.4
16	3.5	3.1	4.2	56	25	3.9	4.0	3.5	2.7	3.4	3.2	3.3
17	3.5	3.1	4.2	56	4.1	3.9	4.0	3.5	2.8	3.4	3.2	3.3
18	3.5	3.1	4.2	26	4.1	3.9	3.9	3.5	2.8	3.5	3.2	3.3
19	3.5	3.1	79	4.0	4.1	3.9	3.9	3.4	2.8	3.5	3.2	3.3
20	3.5	3.1	142	4.0	4.1	3.9	3.9	3.4	2.7	3.6	3.2	3.2
21	3.5	3.1	101	4.1	4.1	3.9	3.9	3.4	2.8	3.6	3.2	3.2
22	3.4	3.1	56	4.4	4.1	3.9	3.8	3.3	3.1	3.5	3.2	3.2
23	3.4	3.6	57	91	4.0	3.9	3.8	3.3	3.0	3.5	3.2	3.2
24	3.4	3.7	57	214	4.0	3.9	3.8	3.3	3.2	3.5	3.2	3.4
25	3.4	3.7	57	202	4.0	3.9	3.8	3.2	3.3	3.5	3.2	3.4
26	3.3	3.8	57	195	4.0	3.9	3.8	3.2	3.3	3.5	3.2	3.4
27	3.3	3.8	57	190	4.0	3.9	3.7	3.2	3.3	3.4	3.2	3.4
28	3.3	3.9	57	186	4.0	3.9	3.7	3.1	3.2	3.4	3.4	3.4
29	3.3	3.9	57	183	---	3.8	3.7	3.1	3.2	3.4	3.4	3.4
30	3.3	3.9	57	138	---	3.8	3.7	3.1	3.3	3.4	3.4	3.4
31	3.3	---	57	113	---	3.8	---	3.1	---	3.4	3.3	---
TOTAL	109.8	100.1	964.1	2510.5	825.7	121.8	114.3	107.5	289.2	107.5	100.3	101.2
MEAN	3.54	3.34	31.1	81.0	29.5	3.93	3.81	3.47	9.64	3.47	3.24	3.37
MAX	3.8	3.9	142	214	119	4.1	4.0	3.8	20	3.6	3.4	3.5
MIN	3.3	3.1	3.9	4.0	4.0	3.8	3.7	3.1	2.7	3.4	3.1	3.2
CFSM	.02	.02	.19	.49	.18	.02	.02	.02	.06	.02	.02	.02
IN.	.02	.02	.22	.57	.19	.03	.03	.02	.07	.02	.02	.02

CAL YR 1988 TOTAL 9740.3 MEAN 26.6 MAX 426 MIN 3.0 CFSM .16 IN. 2.20
WTR YR 1989 TOTAL 5452.0 MEAN 14.9 MAX 214 MIN 2.7 CFSM .09 IN. 1.23

ST. JOHNS RIVER

OKLAWAHA RIVER BASIN

02236901 PALATLAKAHA RIVER BELOW SPILLWAY AT CHERRY LAKE OUTLET, NEAR GROVELAND, FL

LOCATION.--Lat 28°35'32", long 81°49'22", in NE¼ sec.8, T.22 S., R.25 E., Lake County, Hydrologic Unit 03080102, near left bank 20 ft downstream from spillway at outlet of Cherry Lake, and 3 mi northeast of Groveland.

DRAINAGE AREA.--165 mi^2.

PERIOD OF RECORD.--September 1956 to July 1957 (fragmentary), August 1957 to current year (gage heights only). Records of gage heights prior to October 1962 are unpublished and available in files of the Orlando Subdistrict office. Prior to October 1968, published as Palatlakaha Creek at Cherry Lake Outlet, near Groveland (auxiliary).

REVISED RECORDS.--WDR FL-72-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (Gee and Jenson, Inc. bench mark). Prior to Aug. 20, 1957, nonrecording gage at same site and datum.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 97.73 ft, Apr. 5, 1960; minimum, 90.65 ft, June 1, 1962.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 95.31 ft, Jan. 29,30; minimum, 93.79 ft, Jun. 13,20.

GAGE HEIGHT, IN FEET ABOVE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	94.76	94.53	94.94	94.65	95.16	94.53	94.43	94.45	93.94	94.27	94.43	94.35
2	94.75	94.52	94.94	94.65	95.13	94.57	94.42	94.44	93.97	94.29	94.43	94.39
3	94.77	94.52	94.94	94.65	95.13	94.59	94.40	94.42	93.93	94.34	94.44	94.50
4	94.80	94.56	94.94	94.65	95.06	94.60	94.40	94.40	93.90	94.35	94.43	94.49
5	94.79	94.58	94.93	94.63	94.88	94.61	94.47	94.39	93.97	94.35	94.41	94.49
6	94.77	94.52	94.93	94.62	94.77	94.61	94.45	94.37	93.95	94.33	94.40	94.49
7	94.76	94.57	94.93	94.62	94.69	94.61	94.45	94.35	93.96	94.32	94.39	94.50
8	94.75	94.55	94.93	94.61	94.69	94.60	94.42	94.33	94.04	94.31	94.36	94.49
9	94.74	94.55	94.94	94.61	94.69	94.59	94.41	94.30	94.07	94.30	94.35	94.48
10	94.73	94.54	94.94	94.61	94.68	94.58	94.40	94.32	94.04	94.27	94.35	94.46
11	94.72	94.54	94.97	94.60	94.67	94.57	94.39	94.32	94.00	94.28	94.34	94.45
12	94.72	94.52	95.04	94.60	94.66	94.57	94.38	94.30	93.96	94.32	94.35	94.44
13	94.70	94.52	95.03	94.60	94.65	94.56	94.37	94.28	93.92	94.32	94.39	94.43
14	94.68	94.51	94.99	94.59	94.64	94.55	94.35	94.29	93.86	94.32	94.40	94.41
15	94.66	94.50	94.90	94.59	94.63	94.54	94.45	94.29	93.83	94.31	94.39	94.40
16	94.66	94.50	94.77	94.59	94.60	94.53	94.49	94.27	93.83	94.30	94.38	94.39
17	94.66	94.50	94.64	94.58	94.56	94.51	94.54	94.25	93.86	94.33	94.35	94.38
18	94.64	94.49	94.48	94.55	94.55	94.50	94.53	94.23	93.84	94.40	94.34	94.36
19	94.64	94.48	94.49	94.49	94.56	94.49	94.53	94.20	93.93	94.43	94.33	94.35
20	94.63	94.47	94.76	94.42	94.55	94.48	94.53	94.19	93.80	94.49	94.35	94.33
21	94.62	94.47	94.76	94.58	94.56	94.47	94.52	94.18	93.84	94.23	94.35	94.31
22	94.61	94.50	94.61	94.80	94.59	94.46	94.50	94.17	93.93	94.23	94.35	94.30
23	94.60	94.86	94.60	94.93	94.59	94.46	94.49	94.15	93.93	94.52	94.33	94.33
24	94.59	94.88	94.60	95.24	94.56	94.47	94.48	94.13	93.99	94.53	94.32	94.38
25	94.58	94.89	94.62	95.29	94.55	94.46	94.48	94.11	94.02	94.53	94.30	94.46
26	94.57	94.91	94.63	95.29	94.54	94.44	94.45	94.09	94.01	94.51	94.30	94.50
27	94.56	94.92	94.65	95.29	94.53	94.43	94.44	94.07	94.00	94.50	94.31	94.51
28	94.55	94.95	94.65	95.30	94.53	94.42	94.43	94.04	93.98	94.49	94.37	94.50
29	94.54	94.95	94.65	95.31	---	94.41	94.40	94.01	94.06	94.47	94.37	94.50
30	94.53	94.94	94.65	95.26	---	94.41	94.43	93.99	94.20	94.45	94.36	94.49
31	94.53	---	94.65	95.18	---	94.43	---	93.97	---	94.43	94.35	---
MEAN	94.66	94.62	94.79	94.79	94.69	94.52	94.45	94.24	93.95	94.37	94.37	94.43
MAX	94.80	94.95	95.04	95.31	95.16	94.61	94.54	94.45	94.20	94.53	94.44	94.51
MIN	94.53	94.47	94.48	94.42	94.53	94.41	94.35	93.97	93.80	94.23	94.30	94.30

WTR YR 1989 MEAN 94.49 MAX 95.31 MIN 93.80

ST. JOHNS RIVER

OKLAWAHA RIVER BASIN

02237000 PALATLAKAHA RIVER NEAR MASCOTTE, FL

LOCATION.--Lat 28°36'56", long 81°51'53", in SW¼ sec.36, T.21 S., R.24 E., Lake County, Hydrologic Unit 03080102, on left bank 260 ft upstream from spillway, 0.4 mi downstream from bridge on State Highway 565, 0.7 mi downstream from Lake Emma, and 3.2 mi northeast of Mascotte.

DRAINAGE AREA.--182 mi^2.

PERIOD OF RECORD.--May 1945 to March 1956, April 1964 to September 1965, October 1965 to current year (gage heights and discharge measurements only).

REVISED RECORDS.--WDR FL-72-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929. Prior to May 21, 1946, nonrecording gage and May 21, 1946, to Mar. 20, 1956, water-stage recorder, at site 0.5 mi upstream at datum 89.54 ft higher. Since Apr. 6, 1964, auxiliary water-stage recorder on left bank 260 ft downstream from spillway.

REMARKS.--Since Dec. 4, 1963, flow regulated at station by manipulation of gates in spillway. From March 1956 to December 1963, flow was regulated through two box culverts with radial lift gates.

AVERAGE DISCHARGE.--10 years (water years 1946-55), 104 ft^3/s, 7.85 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 458 ft^3/s, Oct. 4,5, 1945; maximum gage height, 96.66 ft, former site, present datum, Oct. 11,12, 1953; gates closed and no flow or leakage only for many days in 1972-83; minimum gage height, 90.60 ft, July 19, 1985.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 94.94 ft, Dec. 11,12; minimum, 93.70 ft, Jan. 24, June 4.

DISCHARGE MEASUREMENTS, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND
DEC		
27...	0940	38

GAGE HEIGHT, IN FEET ABOVE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	94.68	94.45	94.85	94.42	94.53	94.44	94.34	94.39	93.88	94.20	94.35	94.26
2	94.68	94.44	94.85	94.42	94.55	94.48	94.34	94.38	93.80	94.21	94.38	94.29
3	94.69	94.44	94.85	94.42	94.56	94.51	94.33	94.37	93.75	94.26	94.36	94.41
4	94.71	94.49	94.85	94.39	94.56	94.51	94.33	94.36	93.73	94.28	94.35	94.40
5	94.70	94.50	94.84	94.39	94.52	94.52	94.37	94.34	93.82	94.27	94.33	94.40
6	94.68	94.49	94.85	94.39	94.44	94.51	94.36	94.32	93.80	94.26	94.31	94.39
7	94.67	94.48	94.85	94.39	94.41	94.49	94.36	94.29	93.80	94.25	94.29	94.40
8	94.65	94.47	94.85	94.39	94.47	94.49	94.35	94.27	93.86	94.23	94.27	94.39
9	94.65	94.46	94.85	94.39	94.46	94.47	94.34	94.26	93.90	94.22	94.26	94.38
10	94.65	94.45	94.85	94.38	94.45	94.46	94.33	94.25	93.87	94.20	94.25	94.37
11	94.64	94.44	94.88	94.37	94.45	94.46	94.30	94.26	93.84	94.19	94.24	94.37
12	94.63	94.44	94.91	94.37	94.44	94.46	94.29	94.23	93.80	94.24	94.25	94.35
13	94.61	94.43	94.87	94.37	94.44	94.46	94.29	94.23	93.77	94.23	94.29	94.33
14	94.59	94.43	94.66	94.37	94.44	94.45	94.29	94.23	93.78	94.23	94.30	94.32
15	94.59	94.42	94.35	94.36	94.43	94.45	94.37	94.22	93.77	94.23	94.29	94.31
16	94.58	94.42	94.23	94.36	94.44	94.44	94.47	94.21	93.75	94.21	94.27	94.29
17	94.57	94.41	94.11	94.34	94.47	94.43	94.48	94.19	93.78	94.24	94.25	94.28
18	94.56	94.40	93.98	94.36	94.46	94.42	94.48	94.17	93.78	94.32	94.24	94.26
19	94.56	94.40	93.94	94.39	94.46	94.41	94.48	94.15	93.76	94.35	94.24	94.25
20	94.55	94.39	94.02	94.39	94.47	94.40	94.47	94.14	93.75	94.42	94.25	94.23
21	94.54	94.38	94.12	94.47	94.47	94.39	94.45	94.12	93.77	94.41	94.27	94.20
22	94.52	94.41	94.31	94.69	94.49	94.38	94.45	94.10	93.85	94.41	94.25	94.20
23	94.52	94.74	94.36	94.49	94.47	94.39	94.44	94.08	93.86	94.45	94.24	94.24
24	94.51	94.79	94.39	93.76	94.45	94.38	94.43	94.06	93.94	94.45	94.22	94.28
25	94.49	94.82	94.41	93.90	94.44	94.37	94.41	94.04	93.95	94.45	94.20	94.37
26	94.49	94.84	94.42	94.13	94.44	94.36	94.40	94.02	93.94	94.44	94.20	94.43
27	94.48	94.85	94.43	94.18	94.44	94.36	94.38	94.00	93.93	94.42	94.21	94.43
28	94.47	94.85	94.42	94.24	94.44	94.35	94.36	93.98	93.91	94.40	94.29	94.42
29	94.46	94.85	94.42	94.28	---	94.33	94.35	93.96	93.98	94.39	94.28	94.42
30	94.46	94.86	94.42	94.39	---	94.34	94.35	93.94	94.13	94.37	94.27	94.41
31	94.46	---	94.42	94.50	---	94.35	---	93.91	---	94.36	94.25	---
MEAN	94.58	94.54	94.53	94.34	94.47	94.43	94.38	94.18	93.84	94.31	94.27	94.34
MAX	94.71	94.86	94.91	94.69	94.56	94.52	94.48	94.39	94.13	94.45	94.38	94.43
MIN	94.46	94.38	93.94	93.76	94.41	94.33	94.29	93.91	93.73	94.19	94.20	94.20

CAL YR 1988 MEAN 94.35 MAX 95.01 MIN 92.67
WTR YR 1989 MEAN 94.35 MAX 94.91 MIN 93.73

ST. JOHNS RIVER

OKLAWAHA RIVER BASIN

02237001 PALATLAKAHA RIVER BELOW SPILLWAY, NEAR MASCOTTE, FL

LOCATION.--Lat 28°36'57", long 81°51'58", in SW¼ sec.36, T.21 S., R.24 E., Lake County, Hydrologic Unit 03080102, on left bank 260 ft downstream from spillway, 0.4 mi downstream from bridge on State Highway 565, 0.7 mi downstream from Lake Emma, and 3.2 mi northeast of Mascotte.

DRAINAGE AREA.--182 mi^2.

PERIOD OF RECORD.--April 1964 to current year (gage heights only).

REVISED RECORDS.--WDR FL-72-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 93.00 ft, Oct. 1, 1979; minimum, 86.79 ft, May 27, 1975.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 92.20 ft, Dec. 18; minimum, 90.54 ft, Aug. 9.

GAGE HEIGHT, IN FEET ABOVE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	91.70	91.39	91.04	91.07	91.37	91.26	91.18	91.07	90.64	91.20	91.34	90.86
2	91.69	91.38	91.05	91.07	91.45	91.30	91.16	91.08	90.69	91.19	91.40	90.89
3	91.71	91.37	91.05	91.06	91.51	91.33	91.15	91.06	90.75	91.18	91.39	90.96
4	91.72	91.41	91.05	91.06	91.55	91.33	91.15	91.05	90.80	91.17	91.34	90.95
5	91.71	91.42	91.06	91.04	91.59	91.32	91.23	91.03	90.89	91.15	91.17	90.95
6	91.70	91.42	91.06	91.04	91.61	91.32	91.22	91.01	90.95	91.13	91.00	90.94
7	91.68	91.41	91.06	91.05	91.61	91.32	91.21	90.99	91.02	91.12	90.84	90.94
8	91.66	91.39	91.07	91.05	91.64	91.33	91.20	90.96	91.13	91.11	90.68	90.93
9	91.65	91.38	91.07	91.05	91.67	91.32	91.19	90.94	91.16	91.08	90.57	90.91
10	91.63	91.37	91.08	91.05	91.68	91.31	91.19	90.93	91.10	91.06	90.59	90.91
11	91.62	91.36	91.12	91.06	91.57	91.30	91.19	90.97	91.06	91.06	90.61	90.91
12	91.60	91.34	91.20	91.06	91.46	91.29	91.18	90.95	91.03	91.11	90.67	90.90
13	91.60	91.33	91.29	91.07	91.37	91.29	91.18	90.93	91.00	91.11	90.75	90.88
14	91.58	91.32	91.47	91.08	91.29	91.28	91.17	90.92	90.97	91.09	90.78	90.87
15	91.56	91.30	91.80	91.08	91.23	91.27	91.22	90.92	90.94	91.07	90.78	90.86
16	91.55	91.28	91.98	91.09	91.17	91.27	91.27	90.90	90.92	91.05	90.78	90.84
17	91.55	91.27	92.10	91.10	91.16	91.26	91.27	90.88	90.95	91.06	90.77	90.84
18	91.53	91.27	92.17	91.10	91.17	91.26	91.26	90.86	90.93	91.12	90.77	90.83
19	91.53	91.25	92.13	91.09	91.17	91.25	91.24	90.84	90.91	91.15	90.77	90.82
20	91.51	91.24	91.85	91.09	91.17	91.23	91.23	90.83	90.89	91.20	90.79	90.81
21	91.51	91.23	91.62	91.21	91.18	91.22	91.22	90.81	90.90	91.18	90.81	90.79
22	91.50	91.28	91.46	91.48	91.28	91.21	91.20	90.80	90.96	91.18	90.80	90.79
23	91.48	91.57	91.34	91.63	91.29	91.21	91.19	90.78	90.95	91.28	90.79	90.84
24	91.47	91.34	91.23	91.97	91.28	91.22	91.17	90.76	90.99	91.29	90.78	90.87
25	91.46	91.10	91.15	92.00	91.27	91.21	91.15	90.74	90.99	91.28	90.77	90.92
26	91.44	90.91	91.08	91.58	91.26	91.20	91.13	90.73	90.97	91.27	90.76	90.96
27	91.43	90.93	91.02	91.51	91.25	91.19	91.11	90.71	90.95	91.27	90.77	90.95
28	91.42	90.98	91.04	91.25	91.25	91.18	91.10	90.69	90.92	91.36	90.86	90.94
29	91.41	91.01	91.06	91.10	---	91.17	91.08	90.69	90.98	91.34	90.87	90.93
30	91.41	91.02	91.07	91.04	---	91.17	91.06	90.68	91.13	91.32	90.85	90.92
31	91.40	---	91.07	91.24	---	91.18	---	90.66	---	91.33	90.84	---
MEAN	91.56	91.28	91.32	91.21	91.37	91.26	91.18	90.88	90.95	91.18	90.86	90.89
MAX	91.72	91.57	92.17	92.00	91.68	91.33	91.27	91.08	91.16	91.36	91.40	90.96
MIN	91.40	90.91	91.02	91.04	91.16	91.17	91.06	90.66	90.64	91.05	90.57	90.79

CAL YR 1988 MEAN 91.35 MAX 92.21 MIN 90.90
WTR YR 1989 MEAN 91.16 MAX 92.17 MIN 90.57

02237010 PALATLAKAHA RIVER AT STRUCTURE M-6, NEAR MASCOTTE, FL

LOCATION.--Lat 28°38'35", long 81°52'21", in SE¼ sec.23, T.21 S., R.24 E., Lake County, Hydrologic Unit 03080102, on right bank 50 ft upstream from control structure M-6, 1.5 mi west of State Highway 565, and 4.6 mi north of Mascotte.

DRAINAGE AREA.--186 mi^2.

PERIOD OF RECORD.--May 1981 to current year (gage heights only).

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929. Auxiliary water-stage recorder on right bank 150 ft downstream from spillway.

REMARKS.--Flow regulated at station by manipulation of gates in spillway.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 92.97 ft, Aug. 11, 1983; minimum unknown, below lowest recordable stage.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 92.36 ft, Dec. 19; minimum, 90.76 ft, Aug. 9.

GAGE HEIGHT, IN FEET ABOVE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	91.91	91.60	91.25	91.27	91.52	91.47	91.39	91.29	90.86	91.40	91.55	91.07
2	91.90	91.59	91.25	91.27	91.60	91.51	91.38	91.29	90.89	91.40	91.61	91.12
3	91.92	91.58	91.26	91.26	91.66	91.54	91.37	91.27	90.94	91.39	91.60	91.17
4	91.93	91.63	91.27	91.25	91.71	91.54	91.37	91.26	91.00	91.37	91.55	91.16
5	91.92	91.64	91.27	91.24	91.75	91.55	91.44	91.24	91.09	91.36	91.38	91.16
6	91.90	91.63	91.27	91.24	91.77	91.54	91.43	91.22	91.14	91.34	91.21	91.16
7	91.88	91.62	91.28	91.25	91.80	91.53	91.42	91.20	91.22	91.33	91.05	91.15
8	91.87	91.61	91.29	91.25	91.84	91.53	91.42	91.17	91.33	91.32	90.89	91.14
9	91.85	91.59	91.29	91.25	91.87	91.52	91.41	91.15	91.36	91.30	90.79	91.13
10	91.84	91.58	91.29	91.25	91.88	91.52	91.40	91.14	91.30	91.27	90.81	91.12
11	91.83	91.58	91.33	91.25	91.77	91.51	91.39	91.18	91.26	91.28	90.83	91.13
12	91.81	91.56	91.39	91.26	91.66	91.51	91.39	91.16	91.23	91.33	90.89	91.11
13	91.80	91.55	91.48	91.27	91.57	91.50	91.39	91.15	91.21	91.32	90.97	91.10
14	91.78	91.53	91.61	91.28	91.50	91.50	91.38	91.13	91.18	91.31	90.99	91.09
15	91.77	91.52	91.92	91.29	91.43	91.49	91.44	91.13	91.16	91.29	90.99	91.08
16	91.76	91.50	92.12	91.29	91.38	91.48	91.48	91.11	91.14	91.27	90.99	91.07
17	91.75	91.49	92.24	91.30	91.38	91.48	91.48	91.10	91.17	91.28	90.99	91.06
18	91.74	91.48	92.32	91.31	91.38	91.47	91.47	91.08	91.14	91.34	90.98	91.04
19	91.74	91.47	92.30	91.31	91.38	91.46	91.46	91.06	91.13	91.38	90.99	91.04
20	91.73	91.46	92.02	91.31	91.39	91.45	91.44	91.04	91.11	91.42	91.00	91.03
21	91.72	91.45	91.80	91.41	91.40	91.45	91.42	91.03	91.12	91.41	91.02	91.01
22	91.70	91.48	91.67	91.69	91.49	91.44	91.42	91.01	91.18	91.40	91.02	91.01
23	91.69	91.76	91.55	91.75	91.50	91.43	91.40	90.99	91.17	91.49	91.01	91.06
24	91.68	91.54	91.44	91.99	91.49	91.43	91.39	90.98	91.21	91.50	91.00	91.08
25	91.67	91.31	91.36	92.06	91.48	91.42	91.37	90.96	91.20	91.50	90.98	91.13
26	91.66	91.13	91.28	91.66	91.48	91.42	91.35	90.94	91.18	91.48	90.98	91.17
27	91.65	91.15	91.22	91.58	91.47	91.41	91.33	90.93	91.16	91.49	90.99	91.17
28	91.64	91.19	91.24	91.30	91.47	91.40	91.31	90.91	91.14	91.58	91.08	91.16
29	91.63	91.21	91.26	91.16	---	91.39	91.30	90.90	91.19	91.56	91.08	91.15
30	91.61	91.23	91.27	91.14	---	91.39	91.28	90.90	91.34	91.54	91.07	91.14
31	91.61	---	91.28	91.38	---	91.39	---	90.88	---	91.55	91.06	---
MEAN	91.77	91.49	91.51	91.37	91.57	91.47	91.40	91.09	91.16	91.39	91.08	91.11
MAX	91.93	91.76	92.32	92.06	91.88	91.55	91.48	91.29	91.36	91.58	91.61	91.17
MIN	91.61	91.13	91.22	91.14	91.38	91.39	91.28	90.88	90.86	91.27	90.79	91.01

CAL YR 1988 MEAN 91.50 MAX 92.35 MIN 91.07
WTR YR 1989 MEAN 91.37 MAX 92.32 MIN 90.79

OKLAWAHA RIVER BASIN

02237011 PALATLAKAHA RIVER BELOW STRUCTURE M-6, NEAR MASCOTTE, FL

LOCATION.--Lat 28°38'38", long 81°52'21", in SE¼ sec.23, T.21 S., R.24 E., Lake County, Hydrologic Unit 03080102, on right bank 150 ft downstream from control structure M-6, 1.5 mi west of State Highway 565, and 4.6 mi north of Mascotte.

DRAINAGE AREA.--186 mi^2.

PERIOD OF RECORD.--May 1981 to current year (gage heights only).

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 91.90 ft, Mar. 30, 1987; minimum, 85.85 ft, May 31, 1981.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 91.09 ft, Jan. 25; minimum, 88.20 ft, all or part of each day Apr. 12-15.

GAGE HEIGHT, IN FEET ABOVE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	89.08	88.48	88.90	89.65	90.24	88.67	88.35	88.34	88.27	88.62	88.69	88.51
2	89.05	88.47	88.86	89.66	90.26	88.70	88.33	88.35	88.74	88.59	88.75	88.53
3	89.04	88.47	88.82	89.66	90.28	88.70	88.31	88.34	88.75	88.56	88.75	88.57
4	89.03	88.50	88.79	89.66	90.30	88.68	88.30	88.34	88.75	88.53	88.75	88.56
5	88.99	88.50	88.76	89.66	90.32	88.66	88.33	88.33	88.75	88.51	88.75	88.55
6	88.96	88.49	88.73	89.67	90.33	88.63	88.32	88.33	88.75	88.49	88.75	88.54
7	88.92	88.48	88.70	89.68	90.17	88.62	88.29	88.33	88.75	88.48	88.76	88.53
8	88.89	88.47	88.68	89.68	89.65	88.61	88.26	88.32	88.75	88.46	88.76	88.51
9	88.85	88.46	88.65	89.69	89.54	88.59	88.24	88.32	88.75	88.44	88.76	88.50
10	88.82	88.46	88.63	89.70	89.59	88.57	88.22	88.32	88.75	88.42	88.76	88.49
11	88.79	88.45	88.64	89.70	89.85	88.55	88.21	88.33	88.75	88.45	88.76	88.49
12	88.77	88.44	88.88	89.70	89.90	88.53	88.21	88.32	88.75	88.49	88.76	88.48
13	88.74	88.44	89.28	89.69	89.90	88.51	88.20	88.32	88.75	88.47	88.76	88.47
14	88.71	88.43	89.66	89.69	89.90	88.49	88.20	88.31	88.75	88.45	88.76	88.46
15	88.69	88.42	90.17	89.69	89.91	88.48	88.22	88.32	88.72	88.45	88.76	88.46
16	88.67	88.42	90.26	89.69	89.79	88.47	88.22	88.31	88.65	88.43	88.76	88.45
17	88.65	88.41	90.29	89.68	89.24	88.46	88.23	88.31	88.66	88.45	88.74	88.44
18	88.63	88.40	90.30	89.50	89.05	88.45	88.30	88.30	88.62	88.48	88.71	88.44
19	88.61	88.40	90.39	88.97	88.97	88.44	88.31	88.30	88.55	88.49	88.69	88.44
20	88.60	88.39	90.46	88.77	88.91	88.43	88.31	88.30	88.50	88.52	88.68	88.43
21	88.58	88.39	90.31	88.81	88.87	88.42	88.31	88.29	88.51	88.52	88.69	88.41
22	88.57	88.42	89.81	89.02	88.90	88.41	88.31	88.29	88.55	88.51	88.65	88.41
23	88.56	88.97	89.71	89.38	88.87	88.41	88.31	88.29	88.53	88.59	88.62	88.44
24	88.54	89.46	89.69	90.71	88.82	88.40	88.30	88.28	88.55	88.60	88.59	88.45
25	88.53	89.54	89.66	90.95	88.78	88.40	88.33	88.27	88.53	88.59	88.56	88.47
26	88.52	89.44	89.64	90.96	88.75	88.39	88.33	88.27	88.50	88.57	88.53	88.49
27	88.51	89.14	89.63	90.82	88.72	88.38	88.33	88.26	88.46	88.58	88.53	88.47
28	88.50	89.06	89.63	90.88	88.69	88.37	88.33	88.26	88.43	88.65	88.57	88.46
29	88.50	89.00	89.64	90.81	---	88.36	88.33	88.26	88.49	88.61	88.56	88.45
30	88.49	88.95	89.64	90.60	---	88.36	88.33	88.25	88.60	88.62	88.53	88.44
31	88.48	---	89.65	90.23	---	88.35	---	88.24	---	88.71	88.51	---
MEAN	88.72	88.64	89.45	89.84	89.52	88.50	88.29	88.30	88.63	88.53	88.68	88.48
MAX	89.08	89.54	90.46	90.96	90.33	88.70	88.35	88.35	88.75	88.71	88.76	88.57
MIN	88.48	88.39	88.63	88.77	88.69	88.35	88.20	88.24	88.27	88.42	88.51	88.41

WTR YR 1989 MEAN 88.79 MAX 90.96 MIN 88.20

ST. JOHNS RIVER

OKLAWAHA RIVER BASIN

02237050 PALATLAKAHA RIVER AT STRUCTURE M-5, NEAR OKAHUMPKA, FL

LOCATION.--Lat 28°40'43", long 81°53'05", in NW¼ sec.11, T.21 S., R.24 E., Lake County, Hydrologic Unit 03080102, on right bank 50 ft upstream from control structure M-5, 325 ft upstream from Bridges Road, 1.9 mi west of U.S. Highway 27, and 4.8 mi south of Okahumpka.

DRAINAGE AREA.--193 mi^2.

PERIOD OF RECORD.--May 1981 to current year (gage heights only).

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929. Auxiliary water-stage recorder on right bank 150 ft downstream from spillway.

REMARKS.--Flow regulated at station by manipulation of gates in spillway.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 90.59 ft, Aug. 14, 1983; minimum, 82.96 ft, May 31, 1981, estimated.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 89.10 ft, Nov. 26,27; minimum, 86.80 ft, Jan. 24.

GAGE HEIGHT, IN FEET ABOVE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	89.01	88.09	88.84	88.38	87.20	88.56	88.00	87.63	87.17	88.39	88.48	88.30
2	88.97	88.08	88.80	88.37	87.02	88.58	87.97	87.65	87.15	88.39	88.60	88.29
3	88.95	88.06	88.75	88.35	86.96	88.58	87.95	87.64	87.23	88.36	88.56	88.38
4	88.94	88.10	88.72	88.32	86.94	88.57	87.93	87.63	87.52	88.33	88.52	88.36
5	88.90	88.10	88.68	88.30	86.95	88.54	87.97	87.61	87.80	88.30	88.56	88.33
6	88.85	88.09	88.65	88.29	86.95	88.52	87.95	87.59	88.04	88.26	88.68	88.31
7	88.81	88.08	88.62	88.28	87.26	88.49	87.93	87.56	88.29	88.23	88.79	88.29
8	88.77	88.06	88.59	88.27	88.03	88.46	87.90	87.53	88.63	88.20	88.87	88.27
9	88.73	88.04	88.56	88.26	88.05	88.43	87.87	87.51	88.76	88.17	88.93	88.24
10	88.70	88.03	88.53	88.24	87.98	88.40	87.84	87.49	88.58	88.12	88.94	88.22
11	88.66	88.01	88.53	88.22	88.02	88.38	87.81	87.51	88.48	88.11	88.88	88.22
12	88.63	88.00	88.51	88.22	88.23	88.36	87.78	87.49	88.39	88.12	88.84	88.20
13	88.59	87.99	88.39	88.21	88.42	88.34	87.76	87.48	88.35	88.12	88.84	88.17
14	88.55	87.98	88.09	88.19	88.54	88.32	87.74	87.47	88.51	88.12	88.81	88.14
15	88.52	87.96	87.26	88.17	88.61	88.30	87.77	87.46	88.51	88.10	88.77	88.11
16	88.49	87.95	87.28	88.15	88.70	88.28	87.81	87.44	88.48	88.08	88.71	88.09
17	88.45	87.94	87.37	88.13	88.93	88.26	87.79	87.41	88.53	88.08	88.66	88.08
18	88.43	87.93	87.42	88.20	88.92	88.24	87.77	87.39	88.48	88.13	88.62	88.07
19	88.40	87.92	87.34	88.49	88.86	88.21	87.76	87.37	88.42	88.16	88.59	88.07
20	88.38	87.91	87.31	88.54	88.81	88.19	87.74	87.35	88.36	88.22	88.58	88.04
21	88.35	87.90	87.53	88.62	88.78	88.17	87.73	87.33	88.34	88.24	88.58	88.02
22	88.32	87.94	88.40	88.84	88.80	88.15	87.72	87.33	88.38	88.23	88.54	88.00
23	88.29	88.29	88.55	88.63	88.75	88.15	87.71	87.31	88.35	88.34	88.50	88.05
24	88.27	88.48	88.58	86.97	88.71	88.14	87.69	87.30	88.39	88.35	88.46	88.06
25	88.24	88.80	88.56	87.37	88.67	88.12	87.66	87.28	88.36	88.34	88.42	88.09
26	88.21	89.03	88.53	87.92	88.64	88.10	87.64	87.26	88.32	88.33	88.39	88.13
27	88.19	89.08	88.49	87.64	88.61	88.08	87.62	87.25	88.27	88.32	88.37	88.13
28	88.17	89.01	88.45	87.65	88.58	88.06	87.60	87.23	88.23	88.35	88.41	88.12
29	88.14	88.94	88.43	87.56	---	88.04	87.59	87.22	88.22	88.36	88.39	88.11
30	88.13	88.89	88.41	87.68	---	88.02	87.60	87.21	88.31	88.36	88.35	88.10
31	88.11	---	88.39	87.64	---	88.02	---	87.19	---	88.46	88.32	---
MEAN	88.52	88.22	88.28	88.13	88.18	88.29	87.79	87.42	88.23	88.25	88.61	88.17
MAX	89.01	89.08	88.84	88.84	88.93	88.58	88.00	87.65	88.76	88.46	88.94	88.38
MIN	88.11	87.90	87.26	86.97	86.94	88.02	87.59	87.19	87.15	88.08	88.32	88.00

CAL YR 1988 MEAN 88.26 MAX 89.66 MIN 86.08
WTR YR 1989 MEAN 88.17 MAX 89.08 MIN 86.94

ST. JOHNS RIVER

OKLAWAHA RIVER BASIN

02237051 PALATLAKAHA RIVER BELOW STRUCTURE M-5, NEAR OKAHUMPKA, FL

LOCATION.--Lat 28°40'45", long 81°53'05", in NW¼ sec.11, T.21 S., R.24 E., Lake County, Hydrologic Unit 03080102, on right bank 150 ft downstream from control structure M-5, 125 ft upstream from Bridges Road, 1.9 mi west of U.S. Highway 27, and 4.8 mi south of Okahumpka.

DRAINAGE AREA.--193 mi^2.

PERIOD OF RECORD.--May 1981 to current year (gage heights only).

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 87.50 ft, Feb. 23, 1983; minimum, 81.18 ft, May 31, 1981.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 86.76 ft, Jan. 26; minimum, 83.11 ft, June 3,4.

GAGE HEIGHT, IN FEET ABOVE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	85.07	84.35	84.38	85.38	86.17	84.35	84.23	84.14	83.32	84.25	84.31	84.30
2	85.03	84.34	84.37	85.38	86.10	84.39	84.22	84.13	83.19	84.23	84.35	84.33
3	85.01	84.33	84.36	85.38	86.07	84.39	84.23	84.11	83.12	84.22	84.31	84.41
4	85.01	84.36	84.35	85.38	86.06	84.38	84.22	84.10	83.14	84.21	84.30	84.38
5	84.98	84.34	84.35	85.37	86.06	84.37	84.27	84.08	83.31	84.20	84.30	84.38
6	84.94	84.33	84.34	85.37	86.06	84.36	84.23	84.07	83.59	84.19	84.29	84.37
7	84.91	84.32	84.33	85.37	85.84	84.35	84.22	84.05	83.82	84.18	84.29	84.37
8	84.87	84.31	84.33	85.37	85.41	84.35	84.21	84.04	84.11	84.17	84.30	84.37
9	84.84	84.30	84.32	85.38	85.38	84.34	84.20	84.01	84.92	84.17	84.31	84.36
10	84.81	84.29	84.32	85.38	85.36	84.33	84.19	84.01	85.08	84.16	84.32	84.34
11	84.78	84.28	84.34	85.38	85.35	84.32	84.19	84.06	85.07	84.17	84.31	84.33
12	84.76	84.28	84.66	85.38	85.37	84.31	84.19	84.03	85.06	84.17	84.32	84.32
13	84.73	84.28	85.08	85.37	85.38	84.30	84.18	84.01	84.61	84.19	84.32	84.31
14	84.70	84.28	85.52	85.37	85.40	84.29	84.16	84.00	84.18	84.18	84.32	84.30
15	84.68	84.27	85.97	85.37	85.41	84.29	84.20	83.98	84.13	84.17	84.31	84.29
16	84.65	84.26	85.98	85.37	85.25	84.28	84.21	83.96	84.16	84.16	84.30	84.28
17	84.63	84.26	86.01	85.36	84.60	84.28	84.19	83.91	84.19	84.17	84.29	84.28
18	84.60	84.25	86.02	85.09	84.48	84.27	84.18	83.84	84.17	84.19	84.29	84.28
19	84.58	84.25	86.10	84.52	84.45	84.27	84.16	83.78	84.16	84.21	84.31	84.28
20	84.56	84.24	86.19	84.42	84.43	84.26	84.16	83.73	84.16	84.22	84.35	84.27
21	84.53	84.24	86.02	84.50	84.42	84.25	84.15	83.70	84.19	84.20	84.35	84.25
22	84.51	84.29	85.43	84.69	84.44	84.25	84.14	83.69	84.19	84.22	84.34	84.25
23	84.49	84.49	85.40	85.15	84.42	84.25	84.13	83.66	84.19	84.27	84.33	84.29
24	84.47	84.41	85.40	86.41	84.40	84.26	84.12	83.62	84.21	84.26	84.32	84.28
25	84.45	84.41	85.39	86.55	84.39	84.25	84.10	83.59	84.18	84.25	84.31	84.30
26	84.42	84.41	85.39	86.72	84.38	84.24	84.09	83.56	84.16	84.24	84.30	84.31
27	84.40	84.41	85.39	86.68	84.37	84.24	84.09	83.53	84.15	84.23	84.31	84.29
28	84.38	84.41	85.38	86.68	84.36	84.24	84.08	83.50	84.14	84.24	84.33	84.28
29	84.37	84.40	85.38	86.66	---	84.22	84.07	83.49	84.17	84.25	84.32	84.27
30	84.37	84.39	85.38	86.45	---	84.21	84.12	83.45	84.22	84.26	84.30	84.26
31	84.36	---	85.38	86.28	---	84.23	---	83.40	---	84.31	84.30	---
MEAN	84.67	84.33	85.14	85.55	85.14	84.29	84.17	83.85	84.11	84.21	84.31	84.31
MAX	85.07	84.49	86.19	86.72	86.17	84.39	84.27	84.14	85.08	84.31	84.35	84.41
MIN	84.36	84.24	84.32	84.42	84.36	84.21	84.07	83.40	83.12	84.16	84.29	84.25

CAL YR 1988 MEAN 84.72 MAX 87.19 MIN 84.09
WTR YR 1989 MEAN 84.50 MAX 86.72 MIN 83.12

ST. JOHNS RIVER

OKLAWAHA RIVER BASIN

02237206 PALATLAKAHA RIVER AT STRUCTURE M-4, NEAR OKAHUMPKA, FL

LOCATION.--Lat 28°42'53", long 81°53'04", in SW¼ sec.26, T.20 S., R.24 E., Lake County, Hydrologic Unit 03080102, on right bank 50 ft upstream from control structure M-4, 1.4 mi west of U.S. Highway 27, and 2.3 mi south of Okahumpka.

DRAINAGE AREA.--208 mi^2.

PERIOD OF RECORD.--May 1981 to current year (gage heights only).

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929. Auxiliary water-stage recorder on right bank 150 ft downstream from spillway.

REMARKS.--Flow regulated at station by manipulation of gates in spillway.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 86.81 ft, Feb. 23, 1983; minimum unknown, below lowest recordable stage May 28 to June 19, 1981.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 85.09 ft, Oct. 1; minimum, 82.47 ft, June 6.

GAGE HEIGHT, IN FEET ABOVE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	85.08	84.26	84.28	84.25	84.63	84.25	83.80	83.32	82.60	84.14	84.18	84.15
2	85.04	84.24	84.27	84.22	84.42	84.27	83.77	83.32	82.57	84.15	84.20	84.19
3	85.02	84.22	84.26	84.18	84.22	84.30	83.75	83.29	82.54	84.15	84.20	84.30
4	85.02	84.24	84.24	84.13	84.06	84.30	83.74	83.27	82.51	84.14	84.19	84.30
5	84.98	84.24	84.23	84.10	83.95	84.29	83.80	83.24	82.49	84.12	84.18	84.30
6	84.94	84.22	84.22	84.07	83.87	84.27	83.78	83.20	82.48	84.10	84.16	84.29
7	84.90	84.20	84.21	84.03	83.97	84.25	83.76	83.16	82.51	84.09	84.13	84.28
8	84.87	84.17	84.19	84.01	84.40	84.23	83.73	83.13	82.60	84.07	84.11	84.28
9	84.84	84.15	84.18	83.98	84.31	84.21	83.71	83.10	82.66	84.05	84.14	84.25
10	84.82	84.13	84.17	83.96	84.19	84.19	83.68	83.07	82.71	84.02	84.16	84.22
11	84.79	84.10	84.18	83.94	84.08	84.18	83.65	83.11	83.10	84.00	84.15	84.20
12	84.76	84.08	84.12	83.93	83.97	84.16	83.62	83.09	83.53	83.99	84.14	84.17
13	84.72	84.06	83.87	83.92	83.90	84.15	83.60	83.06	83.80	84.00	84.14	84.14
14	84.69	84.04	83.53	83.91	83.85	84.13	83.59	83.04	83.87	84.03	84.15	84.11
15	84.67	84.02	83.05	83.89	83.81	84.11	83.60	83.01	83.82	84.02	84.14	84.08
16	84.64	84.00	83.45	83.87	83.87	84.09	83.63	82.98	83.79	84.00	84.12	84.05
17	84.61	83.98	83.71	83.85	84.30	84.07	83.62	82.96	83.84	83.99	84.11	84.03
18	84.59	83.96	83.88	83.93	84.34	84.05	83.59	82.93	83.81	84.02	84.13	84.01
19	84.56	83.94	83.92	84.29	84.34	84.03	83.56	82.90	83.78	84.07	84.17	83.99
20	84.54	83.91	83.92	84.31	84.34	84.01	83.54	82.87	83.76	84.08	84.19	83.97
21	84.51	83.89	84.14	84.39	84.34	83.99	83.51	82.85	83.78	84.09	84.24	83.93
22	84.48	83.95	84.69	84.60	84.35	83.96	83.48	82.85	83.90	84.09	84.24	83.91
23	84.45	84.30	84.69	84.51	84.34	83.95	83.45	82.82	83.90	84.16	84.23	83.94
24	84.43	84.33	84.63	83.45	84.32	83.95	83.43	82.79	83.96	84.16	84.21	83.94
25	84.40	84.33	84.57	83.76	84.30	83.93	83.39	82.77	83.98	84.17	84.19	83.95
26	84.37	84.34	84.51	84.17	84.29	83.91	83.36	82.74	83.97	84.15	84.18	83.97
27	84.35	84.33	84.46	84.49	84.27	83.89	83.33	82.71	83.96	84.14	84.17	83.96
28	84.32	84.32	84.42	84.55	84.26	83.87	83.29	82.69	83.94	84.17	84.19	83.94
29	84.29	84.31	84.37	84.58	---	83.85	83.26	82.69	83.97	84.16	84.19	83.92
30	84.28	84.30	84.33	84.64	---	83.83	83.29	82.66	84.03	84.14	84.17	83.90
31	84.28	---	84.29	84.76	---	83.82	---	82.63	---	84.17	84.15	---
MEAN	84.65	84.15	84.16	84.15	84.19	84.08	83.58	82.98	83.41	84.09	84.17	84.09
MAX	85.08	84.34	84.69	84.76	84.63	84.30	83.80	83.32	84.03	84.17	84.24	84.30
MIN	84.28	83.89	83.05	83.45	83.81	83.82	83.26	82.63	82.48	83.99	84.11	83.90

CAL YR 1988 MEAN 84.02 MAX 85.53 MIN 82.42
WTR YR 1989 MEAN 83.97 MAX 85.08 MIN 82.48

ST. JOHNS RIVER

OKLAWAHA RIVER BASIN

02237207 PALATLAKAHA RIVER BELOW STRUCTURE M-4, NEAR OKAHUMPKA, FL

LOCATION.--Lat 28°42'56", long 81°53'03", in SW¼ sec.26, T.20 S., R.24 E., Lake County, Hydrologic Unit 03080102, on right bank 150 ft downstream from control structure M-4, 1.4 mi west of U.S. Highway 27, and 2.3 mi south of Okahumpka.

DRAINAGE AREA.--208 mi^2.

PERIOD OF RECORD.--May 1981 to current year (gage heights only).

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 84.59 ft, Mar. 22, 1983; minimum, 76.35 ft, June 11, 1981.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 83.50 ft, Jan. 28,29; minimum, 79.45 ft, all or part of each day June 3-6.

GAGE HEIGHT, IN FEET ABOVE DATUM, WATER YEAR 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	80.25	80.24	80.29	81.74	82.93	80.15	80.13	80.01	79.47	79.64	79.60	79.68
2	80.25	80.25	80.36	81.73	82.86	80.16	80.13	79.99	79.47	79.63	79.60	79.68
3	80.25	80.24	80.35	81.73	82.79	80.16	80.12	79.97	79.46	79.63	79.59	79.70
4	80.25	80.25	80.31	81.73	82.74	80.16	80.12	79.93	79.45	79.63	79.60	79.68
5	80.26	80.24	80.30	81.73	82.71	80.16	80.13	79.93	79.45	79.63	79.60	79.67
6	80.26	80.23	80.29	81.73	82.68	80.16	80.12	79.94	79.47	79.62	79.59	79.67
7	80.26	80.23	80.28	81.72	82.31	80.16	80.12	79.89	79.50	79.62	79.58	79.93
8	80.26	80.23	80.25	81.72	81.79	80.17	80.12	79.87	79.54	79.62	79.58	80.18
9	80.26	80.23	80.23	81.72	81.79	80.17	80.12	79.84	79.52	79.62	79.61	80.18
10	80.26	80.23	80.23	81.71	81.78	80.17	80.11	79.82	79.50	79.62	79.60	80.18
11	80.26	80.22	80.24	81.71	81.76	80.17	80.10	79.84	79.73	79.62	79.59	80.19
12	80.27	80.22	80.92	81.71	81.75	80.17	80.10	79.82	79.96	79.62	79.60	80.15
13	80.27	80.22	81.47	81.71	81.74	80.16	80.05	79.81	80.01	79.62	79.60	80.14
14	80.27	80.22	81.92	81.71	81.73	80.16	80.05	79.77	80.03	79.60	79.61	80.14
15	80.27	80.21	82.32	81.71	81.73	80.16	80.09	79.71	80.03	79.58	79.60	80.14
16	80.28	80.21	82.49	81.71	81.24	80.17	80.11	79.68	80.03	79.57	79.60	80.14
17	80.27	80.21	82.58	81.71	80.12	80.17	80.11	79.66	80.05	79.58	79.59	80.15
18	80.27	80.20	82.64	81.05	80.12	80.17	80.10	79.64	80.05	79.62	79.63	80.15
19	80.27	80.20	82.77	80.18	80.13	80.17	80.10	79.62	80.05	79.63	79.68	80.16
20	80.27	80.19	82.85	80.17	80.14	80.16	80.09	79.60	80.05	79.62	79.69	80.16
21	80.27	80.19	82.56	80.19	80.13	80.16	80.09	79.58	79.92	79.63	79.69	80.15
22	80.28	80.21	81.80	80.21	80.14	80.16	80.09	79.57	79.65	79.67	79.68	80.15
23	80.28	80.28	81.80	80.86	80.14	80.16	80.08	79.54	79.63	79.68	79.68	80.16
24	80.28	80.27	81.79	82.95	80.15	80.16	80.08	79.52	79.64	79.67	79.69	80.16
25	80.28	80.26	81.78	83.12	80.15	80.16	80.06	79.51	79.63	79.67	79.69	80.18
26	80.27	80.25	81.77	83.32	80.15	80.16	80.05	79.50	79.62	79.66	79.69	80.18
27	80.27	80.25	81.77	83.46	80.15	80.15	80.04	79.49	79.61	79.66	79.69	80.18
28	80.26	80.24	81.76	83.48	80.15	80.15	80.02	79.49	79.62	79.69	79.69	80.17
29	80.25	80.24	81.75	83.49	---	80.14	80.01	79.50	79.64	79.66	79.66	80.17
30	80.26	80.24	81.75	83.25	---	80.14	80.01	79.49	79.64	79.65	79.66	80.17
31	80.25	---	81.74	82.96	---	80.13	---	79.48	---	79.61	79.66	---
MEAN	80.26	80.23	81.40	81.87	81.29	80.16	80.09	79.71	79.71	79.63	79.63	80.06
MAX	80.28	80.28	82.85	83.49	82.93	80.17	80.13	80.01	80.05	79.69	79.69	80.19
MIN	80.25	80.19	80.23	80.17	80.12	80.13	80.01	79.48	79.45	79.57	79.58	79.67

CAL YR 1988 MEAN 80.59 MAX 84.39 MIN 79.54
WTR YR 1989 MEAN 80.33 MAX 83.49 MIN 79.45

OKLAWAHA RIVER BASIN

02237293 PALATLAKAHA RIVER AT STRUCTURE M-1, NEAR OKAHUMPKA, FL

LOCATION.--Lat 28°44'39", long 81°52'22", in SE¼ sec.14, T.20 S., R.24 E., Lake County, Hydrologic Unit 03080102, on left bank 150 ft upstream from structure M-1, 270 ft downstream from Seaboard Coast Line Railroad bridge, 0.3 mi upstream from bridge on State Highway 48, and 1.4 mi east of Okahumpka.

DRAINAGE AREA.--221 mi^2.

PERIOD OF RECORD.--January 1970 to July 1976, October 1976 to current year.

REVISED RECORDS.--WDR FL-72-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: July 22 to Aug. 7. Records fair. Flow regulated by manipulation of gates in spillway. Discharge computed from relation between discharge and gate openings.

COOPERATION.--Gate-opening record provided by the Oklawaha Basin Recreation and Water Conservation and Control Authority.

AVERAGE DISCHARGE.--18 years (water years 1971-75, 1977-89), 19.6 ft^3/s, 1.20 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 486 ft^3/s, Mar. 12, 1970; maximum gage height, 74.18 ft, Apr. 3, 1970; no flow for many days in most years; minimum gage height, 66.26 ft, June 24,25, 1985, gates opened for structure repairs.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 207 ft^3/s, Jan. 24; maximum gage height, 72.25 ft, Feb. 7; no flow May 24 to June 7; minimum gage height, 67.14 ft, Jan. 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.8	3.0	3.2	61	85	3.1	2.3	1.5	.00	2.8	.67	.36
2	3.7	2.9	3.1	60	80	3.2	2.2	1.6	.00	2.5	.63	.45
3	3.7	2.9	3.0	60	74	3.3	2.1	1.5	.00	2.2	.57	.80
4	4.2	3.2	3.0	59	70	3.3	2.1	1.3	.00	1.9	.48	.80
5	3.8	3.2	3.0	60	66	3.2	2.9	1.2	.00	1.7	.45	.74
6	3.6	3.3	3.0	60	64	3.2	2.8	1.1	.00	1.5	.42	.67
7	3.5	3.3	3.0	60	62	3.1	2.5	1.0	.00	1.5	.36	.57
8	3.4	3.2	3.0	60	66	3.0	2.3	.91	.03	1.4	.30	.67
9	3.4	3.1	2.9	58	66	2.9	2.2	.84	.12	1.2	.33	1.3
10	3.3	3.1	2.9	58	66	2.9	2.2	.77	.10	1.1	.39	1.9
11	3.2	3.1	3.0	58	65	2.9	2.1	.91	.08	1.1	.36	2.1
12	3.2	3.1	6.5	56	64	2.9	2.0	.87	.02	1.1	.33	2.1
13	3.1	3.1	38	56	62	2.9	2.0	.77	.04	.94	.39	2.0
14	3.0	3.1	49	56	61	2.8	2.0	.74	.39	.94	.48	2.0
15	3.0	3.0	64	56	61	2.8	2.3	.70	.80	.87	.42	2.0
16	3.0	3.0	72	56	56	2.8	2.7	.57	1.1	.80	.33	2.0
17	3.0	3.0	77	56	8.6	2.8	2.4	.42	1.6	.74	.28	2.0
18	3.0	3.1	78	47	5.2	2.8	2.2	.20	1.7	.84	.33	2.0
19	3.0	3.1	105	6.9	4.6	2.7	2.0	.12	1.7	1.1	.67	2.0
20	3.0	3.2	108	4.9	3.9	2.6	2.0	.04	1.8	1.1	.80	2.0
21	2.9	3.2	100	5.6	3.7	2.5	1.9	.02	2.3	1.0	.84	2.0
22	2.9	3.6	46	7.8	3.7	2.5	1.7	.08	3.6	.94	.77	1.9
23	2.9	8.6	36	33	3.5	2.6	1.6	.02	3.0	1.1	.67	2.2
24	2.8	6.1	61	207	3.3	2.8	1.4	.00	2.7	1.2	.54	2.3
25	2.8	5.8	62	173	3.2	2.7	1.3	.00	2.1	1.1	.42	2.4
26	2.8	5.0	62	133	3.2	2.6	1.4	.00	1.7	.87	.39	2.7
27	2.8	3.7	62	150	3.2	2.4	1.2	.00	1.5	.77	.39	2 6
28	2.7	3.5	62	158	3.1	2.4	1.1	.00	1.5	.74	.42	2.4
29	2.7	3.4	62	160	---	2.3	1.2	.00	2.2	.77	.42	2.3
30	2.8	3.3	62	129	---	2.3	1.4	.00	2.7	.80	.36	2.2
31	3.0	---	61	89	---	2.4	---	.00	---	.70	.28	---
TOTAL	98.0	108.2	1306.6	2294.2	1117.2	86.7	59.5	17.18	32.78	37.32	14.49	51.46
MEAN	3.16	3.61	42.1	74.0	39.9	2.80	1.98	.55	1.09	1.20	.47	1.72
MAX	4.2	8.6	108	207	85	3.3	2.9	1.6	3.6	2.8	.84	2.7
MIN	2.7	2.9	2.9	4.9	3.1	2.3	1.1	.00	.00	.70	.28	.36

CAL YR 1988 TOTAL 12233.90 MEAN 33.4 MAX 379 MIN .76
WTR YR 1989 TOTAL 5223.63 MEAN 14.3 MAX 207 MIN .00

02237293 PALATLAKAHA RIVER AT STRUCTURE M-1, NEAR OKAHUMPKA, FL--Continued

GAGE HEIGHT, IN FEET ABOVE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	71.16	70.86	70.93	72.07	70.76	70.90	70.72	70.55	69.90	70.81	70.32	70.22
2	71.13	70.84	70.89	72.06	70.42	70.95	70.70	70.56	69.89	70.75	70.31	70.25
3	71.13	70.85	70.88	72.06	70.06	70.97	70.68	70.54	69.86	70.70	70.29	70.36
4	71.19	70.94	70.88	72.05	69.77	70.98	70.68	70.49	69.85	70.63	70.26	70.36
5	71.14	70.95	70.87	72.06	69.57	70.95	70.85	70.47	69.84	70.59	70.25	70.34
6	71.08	70.96	70.86	72.06	69.42	70.92	70.82	70.44	69.83	70.55	70.24	70.32
7	71.03	70.96	70.86	72.06	70.31	70.89	70.75	70.42	69.90	70.55	70.22	70.29
8	71.00	70.94	70.86	72.06	72.13	70.87	70.72	70.39	70.03	70.52	70.20	70.32
9	70.99	70.91	70.85	72.04	72.13	70.85	70.70	70.37	70.11	70.48	70.21	70.50
10	70.97	70.90	70.84	72.04	72.13	70.84	70.69	70.35	70.10	70.45	70.23	70.62
11	70.95	70.90	70.87	72.04	72.12	70.84	70.68	70.39	70.09	70.43	70.22	70.68
12	70.93	70.90	71.09	72.03	72.11	70.84	70.66	70.38	70.05	70.44	70.21	70.68
13	70.91	70.90	71.80	72.03	72.09	70.83	70.66	70.35	70.06	70.40	70.23	70.66
14	70.88	70.90	71.30	72.03	72.08	70.82	70.65	70.34	70.23	70.40	70.26	70.66
15	70.88	70.88	70.88	72.03	72.07	70.81	70.71	70.33	70.36	70.38	70.24	70.65
16	70.88	70.87	71.55	72.03	72.02	70.81	70.79	70.29	70.45	70.36	70.21	70.65
17	70.86	70.86	71.97	72.03	71.39	70.80	70.73	70.24	70.57	70.34	70.19	70.66
18	70.86	70.89	72.08	71.91	71.25	70.80	70.69	70.15	70.59	70.37	70.21	70.66
19	70.87	70.91	70.65	71.33	71.22	70.79	70.66	70.11	70.59	70.43	70.32	70.66
20	70.86	70.92	69.02	71.23	71.15	70.77	70.65	70.06	70.60	70.43	70.36	70.65
21	70.85	70.94	69.62	71.27	71.11	70.75	70.62	70.05	70.72	70.42	70.37	70.64
22	70.84	71.03	69.42	71.36	71.10	70.75	70.59	70.09	71.09	70.40	70.35	70.63
23	70.83	71.39	70.15	70.66	71.05	70.77	70.57	70.05	70.88	70.44	70.32	70.70
24	70.81	71.30	72.08	70.64	70.98	70.80	70.51	70.04	70.78	70.47	70.28	70.71
25	70.80	71.28	72.09	69.85	70.95	70.78	70.49	70.00	70.68	70.44	70.24	70.73
26	70.80	71.24	72.09	68.86	70.93	70.76	70.51	69.87	70.59	70.38	70.23	70.78
27	70.80	71.13	72.09	69.27	70.92	70.74	70.46	69.81	70.53	70.35	70.23	70.76
28	70.79	71.06	72.09	69.40	70.90	70.73	70.44	69.85	70.54	70.34	70.24	70.74
29	70.79	71.00	72.09	69.44	---	70.72	70.46	69.91	70.70	70.35	70.24	70.72
30	70.81	70.96	72.09	70.31	---	70.72	70.51	69.93	70.79	70.36	70.22	70.70
31	70.87	---	72.08	70.97	---	70.73	---	69.92	---	70.33	70.19	---
MEAN	70.93	70.98	71.16	71.33	71.15	70.82	70.64	70.22	70.34	70.46	70.25	70.58
MAX	71.19	71.39	72.09	72.07	72.13	70.98	70.85	70.56	71.09	70.81	70.37	70.78
MIN	70.79	70.84	69.02	68.86	69.42	70.72	70.44	69.81	69.83	70.33	70.19	70.22

CAL YR 1988 MEAN 70.74 MAX 72.69 MIN 67.82
WTR YR 1989 MEAN 70.74 MAX 72.13 MIN 68.86

02237700 APOPKA-BEAUCLAIR CANAL NEAR ASTATULA, FL

LOCATION.--Lat 28°43'20", long 81°41'06", in NW¼ sec.26, T.20 S., R.26 E., Lake County, Hydrologic Unit 03080102, near left bank 80 ft upstream from lock and dam, 500 ft upstream from bridge on county road 48, and 2.5 mi east of Astatula.

DRAINAGE AREA.--184 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1942 to June 1948, discharge measurements only at site 1.5 mi downstream, July 1958 to current year.

REVISED RECORDS.--WSP 1905: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929. Prior to June 1948, nonrecording gage at site 1.5 mi downstream at datum 60.68 ft higher. March to June 1958, nonrecording gage at present site and datum. Since July 1958, auxiliary water-stage recorder at downstream side of lock and dam at same datum.

REMARKS.--Records fair. Since May 1956, flow regulated at station by manipulation of gates in spillway. Discharge computed from relation between discharge, head, and gate openings.

COOPERATION.--Gate-opening record provided by St. Johns River Water Management District.

AVERAGE DISCHARGE.--31 years (water years 1959-89), 77.8 ft^3/s, 56,370 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 754 ft^3/s, Mar. 19, 1960; maximum gage height, 68.48 ft, Oct. 6, 1960; no flow for many days in 1964-66, 1968-69, 1971-72, 1974; minimum gage height, 63.70 ft, May 13, 1971, affected by wind.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 160 ft^3/s, Feb. 3,5; maximum gage height, 67.53 ft, Nov. 23, affected by wind; minimum daily discharge, 33 ft^3/s, many days; minimum gage height, 65.82 ft, June 8, affected by wind.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	36	34	36	36	117	57	35	36	34	34	34	34
2	35	34	36	36	159	57	36	35	34	34	34	34
3	36	35	36	36	160	59	36	36	33	35	33	34
4	36	35	36	36	159	59	36	36	33	35	34	34
5	36	35	36	36	160	59	36	37	33	35	34	34
6	36	35	36	36	158	58	35	35	33	35	33	34
7	35	35	36	36	158	57	35	35	33	36	33	34
8	35	35	36	36	157	57	35	35	33	35	33	34
9	35	35	36	36	155	56	35	35	35	35	33	34
10	35	34	36	36	155	57	35	35	33	35	33	34
11	36	34	36	36	155	57	35	35	35	34	33	34
12	35	34	36	36	155	58	35	35	34	34	33	34
13	35	34	36	36	120	57	35	35	33	34	34	34
14	35	34	36	36	58	57	35	35	34	34	34	34
15	35	34	36	36	58	57	36	35	33	34	34	34
16	35	34	36	36	58	57	36	35	33	34	34	34
17	35	34	36	36	58	57	36	35	33	34	34	34
18	35	34	36	36	58	58	36	35	33	34	34	34
19	35	34	36	36	58	58	36	35	33	34	34	34
20	35	34	36	36	58	57	36	34	36	34	34	34
21	35	34	36	36	58	57	36	34	33	34	34	33
22	35	55	36	37	57	57	36	34	33	34	34	34
23	35	99	36	37	56	58	36	34	35	34	34	34
24	35	101	36	38	56	57	36	34	34	34	34	35
25	35	102	36	38	57	57	36	34	35	34	34	35
26	35	103	36	38	57	57	35	34	34	34	34	35
27	35	103	36	38	57	57	35	34	34	34	34	35
28	35	62	36	38	57	45	35	34	35	34	34	35
29	35	36	36	38	---	36	35	34	33	34	34	35
30	34	36	36	38	---	36	36	34	34	34	34	35
31	34	---	37	39	---	35	---	34	---	34	34	---
TOTAL	1089	1418	1117	1135	2829	1701	1066	1078	1011	1063	1046	1026
MEAN	35.1	47.3	36.0	36.6	101	54.9	35.5	34.8	33.7	34.3	33.7	34.2
MAX	36	103	37	39	160	59	36	37	36	36	34	35
MIN	34	34	36	36	56	35	35	34	33	34	33	33
AC-FT	2160	2810	2220	2250	5610	3370	2110	2140	2010	2110	2070	2040

CAL YR 1988 TOTAL 29770 MEAN 81.3 MAX 471 MIN 32 AC-FT 59050
WTR YR 1989 TOTAL 15579 MEAN 42.7 MAX 160 MIN 33 AC-FT 30900

ST. JOHNS RIVER

OKLAWAHA RIVER BASIN

02237700 APOPKA-BEAUCLAIR CANAL NEAR ASTATULA, FL--Continued

GAGE HEIGHT, IN FEET ABOVE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	66.87	66.61	66.96	67.07	67.30	67.00	66.77	67.01	66.48	66.46	66.49	66.50
2	66.86	66.61	66.96	67.06	67.27	67.03	66.88	66.86	66.46	66.52	66.45	66.53
3	66.94	66.66	66.97	67.00	67.26	67.08	66.87	66.89	66.42	66.66	66.42	66.54
4	66.96	66.75	66.96	66.97	67.23	67.08	66.88	66.93	66.37	66.69	66.45	66.49
5	66.92	66.69	66.95	67.04	67.26	67.12	66.89	66.92	66.35	66.69	66.44	66.46
6	66.88	66.66	66.98	67.06	67.24	67.11	66.79	66.83	66.34	66.71	66.40	66.48
7	66.83	66.65	67.00	67.04	67.22	67.00	66.80	66.72	66.33	66.72	66.36	66.52
8	66.82	66.66	66.99	67.03	67.17	66.95	66.85	66.77	66.36	66.70	66.40	66.52
9	66.85	66.66	66.99	67.03	67.08	66.84	66.84	66.78	66.45	66.68	66.37	66.54
10	66.85	66.64	66.99	67.00	67.06	66.92	66.80	66.73	66.43	66.65	66.35	66.53
11	66.87	66.62	67.00	67.01	67.07	66.97	66.73	66.70	66.43	66.62	66.35	66.54
12	66.84	66.62	66.96	67.03	67.05	66.99	66.71	66.71	66.43	66.59	66.40	66.52
13	66.78	66.62	66.99	67.03	67.11	67.00	66.72	66.72	66.39	66.57	66.54	66.51
14	66.78	66.61	67.06	67.04	67.16	67.02	66.76	66.72	66.40	66.58	66.53	66.51
15	66.78	66.60	67.07	67.02	67.15	67.01	66.87	66.69	66.39	66.58	66.51	66.55
16	66.79	66.61	67.05	66.99	67.14	67.01	66.97	66.68	66.37	66.55	66.49	66.51
17	66.77	66.59	66.97	66.98	67.10	67.01	67.00	66.67	66.36	66.54	66.50	66.53
18	66.78	66.60	66.99	66.98	67.05	67.01	66.98	66.68	66.32	66.55	66.51	66.49
19	66.78	66.62	67.04	66.99	67.07	66.97	66.97	66.65	66.30	66.55	66.50	66.47
20	66.78	66.61	67.04	66.97	67.11	67.00	66.95	66.62	66.31	66.58	66.57	66.46
21	66.75	66.56	67.04	67.02	67.15	66.97	66.89	66.57	66.29	66.59	66.58	66.39
22	66.71	66.54	67.05	67.14	67.04	66.97	66.91	66.55	66.40	66.58	66.57	66.50
23	66.73	66.76	67.05	67.24	66.80	67.04	66.92	66.52	66.44	66.60	66.58	66.60
24	66.72	66.93	67.07	67.32	66.87	66.91	66.90	66.49	66.50	66.61	66.56	66.69
25	66.66	67.00	67.06	67.34	66.97	66.92	66.87	66.48	66.50	66.58	66.53	66.75
26	66.69	67.04	67.06	67.35	66.99	66.93	66.85	66.48	66.49	66.54	66.51	66.80
27	66.69	67.04	67.08	67.33	67.02	66.97	66.83	66.49	66.49	66.53	66.50	66.79
28	66.68	66.96	67.08	67.35	67.00	66.96	66.80	66.48	66.46	66.50	66.51	66.81
29	66.67	66.99	67.08	67.35	---	66.95	66.83	66.47	66.42	66.49	66.50	66.82
30	66.63	67.00	67.07	67.36	---	66.97	66.89	66.49	66.40	66.49	66.48	66.86
31	66.64	---	67.09	67.34	---	66.85	---	66.49	---	66.51	66.47	---
MEAN	66.78	66.72	67.02	67.11	67.10	66.99	66.86	66.67	66.40	66.59	66.48	66.57
MAX	66.96	67.04	67.09	67.36	67.30	67.12	67.00	67.01	66.50	66.72	66.58	65.86
MIN	66.63	66.54	66.95	66.97	66.80	66.84	66.71	66.47	66.29	66.46	66.35	66.39

CAL YR 1988 MEAN 66.72 MAX 67.20 MIN 66.23
WTR YR 1989 MEAN 66.77 MAX 67.36 MIN 66.29

ST. JOHNS RIVER

OKLAWAHA RIVER BASIN

02237700 APOPKA-BEAUCLAIR CANAL NEAR ASTATULA, FL--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1966-73, 1975-83, 1986 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	GAGE HEIGHT (FEET) (00065)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	NITRO- GEN, NITRITE TOTAL (MG/L AS N) (00615)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)
NOV										
07...	1230	66.68	390	--	23.5	7.9	<0.010	<0.010	<0.020	<0.020
21...	0930	66.60	370	--	25.0	3.6	<0.010	<0.010	<0.020	<0.020
DEC										
19...	1115	67.04	386	--	12.0	10.2	<0.010	<0.010	<0.020	<0.010
JAN										
06...	1200	67.06	439	--	18.5	8.1	<0.010	<0.010	<0.020	<0.020
19...	1130	67.02	393	--	20.0	6.4	<0.010	<0.010	<0.020	<0.020
FEB										
07...	1215	67.26	371	--	24.0	7.1	<0.010	<0.010	<0.020	<0.020
23...	1210	66.88	435	7.8	18.0	5.8	0.010	<0.010	<0.020	<0.020
MAR										
16...	1010	67.04	381	9.2	21.5	10.8	<0.010	<0.010	<0.020	<0.020
30...	1110	67.06	390	8.6	26.0	6.4	<0.010	<0.010	<0.020	<0.020
APR										
13...	1310	66.76	426	--	21.0	6.3	<0.010	<0.010	<0.020	<0.020
MAY										
04...	1115	66.90	380	--	25.5	5.1	0.010	<0.010	<0.020	0.020
16...	1245	66.68	400	8.5	27.5	--	<0.010	<0.010	<0.020	<0.020
JUN										
15...	1544	66.38	444	8.8	32.0	5.7	0.010	<0.010	0.090	<0.020
29...	0955	66.45	559	7.4	29.5	1.2	0.120	0.120	0.340	0.360
JUL										
17...	1025	66.56	443	7.6	30.5	3.2	0.010	0.010	<0.020	0.020
26...	1000	66.57	565	7.5	29.0	3.0	0.030	0.030	0.120	0.140
AUG										
01...	1100	66.49	527	--	30.0	2.9	0.010	0.010	0.040	0.050
11...	1030	66.36	520	--	29.0	--	0.010	0.010	<0.020	<0.020
14...	1050	66.59	409	--	26.5	--	0.050	--	0.450	--
15...	1122	66.45	436	-	28.0	--	0.070	--	0.590	--
SEP										
14...	1045	66.54	487	7.7	29.5	--	0.050	0.050	0.250	0.240
28...	1005	66.80	556	7.4	28.5	--	0.060	0.060	0.490	0.200

02237700 APOPKA-BEAUCLAIR CANAL NEAR ASTATULA, FL--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	COLOR (PLAT-INUM-COBALT UNITS) (00080)	TUR-BID-ITY (NTU) (00076)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
NOV												
07...	1230	50	10	160	35	17	19	11	126	22	38	21
DEC												
19...	1115	40	6.9	150	33	16	14	11	118	21	34	23
JAN												
19...	1130	30	21	150	32	17	15	12	119	--	--	25
FEB												
23...	1210	60	7.9	170	41	17	14	11	137	25	37	26
MAR												
16...	1010	40	18	150	32	16	14	11	125	22	35	E21
APR												
13...	1310	70	14	170	41	17	14	10	137	20	34	20
MAY												
16...	1245	30	12	160	33	18	16	11	118	28	38	31
JUN												
15...	1544	30	14	170	37	18	21	13	137	23	41	28
JUL												
17...	1025	80	9.5	170	42	17	15	11	138	23	34	29
SEP												
14...	1045	140	5.9	200	49	18	13	11	139	47	29	35

DATE	TIME	NITRO-GEN, NO2+NO3 TOT. IN BOT MAT (MG/KG AS N) (00633)	NITRO-GEN,NH4 TOTAL IN BOT. MAT. (MG/KG AS N) (00611)	NITRO-GEN,NH4 + ORG. TOT IN BOT MAT (MG/KG AS N) (00626)	PHOS-PHOROUS TOTAL IN BOT. MAT. (MG/KG AS P) (00668)	CARBON, INORG + ORGANIC TOT. IN BOT MAT (MG/KG AS C) (00693)	CARBON, INOR-GANIC, TOT IN BOT MAT (G/KG AS C) (00686)
JUN							
15...	1544	<2.0	53	820	250	17	6.9

DATE	NITRO-GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS-PHOROUS TOTAL (MG/L AS P) (00665)	PHOS-PHOROUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS, ORTHO, TOTAL (MG/L AS P) (70507)	PHOS-PHOROUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)
NOV									
07...	<0.010	<0.010	4.3	4.3	1.8	0.210	<0.020	0.060	<0.010
21...	0.010	0.010	3.7	3.7	1.8	0.180	0.020	0.040	0.010
DEC									
19...	0.010	0.010	4.0	4.0	1.7	0.220	0.020	0.050	0.010
JAN									
06...	0.010	0.010	4.5	4.5	1.6	0.250	<0.020	0.080	0.010
19...	<0.010	<0.010	3.9	3.9	1.7	0.200	0.020	0.050	0.010
FEB									
07...	<0.010	<0.010	4.4	4.4	1.7	0.200	<0.020	0.060	0.020
23...	0.010	0.010	3.7	3.7	1.7	0.270	<0.020	0.050	<0.010
MAR									
16...	0.010	0.010	5.3	5.3	1.6	0.250	<0.020	0.080	<0.010
30...	0.010	0.010	4.3	4.3	1.8	0.180	<0.020	0.030	<0.010
APR									
13...	<0.010	<0.010	4.0	4.0	1.7	0.240	<0.020	0.050	<0.010
MAY									
04...	0.010	0.010	4.0	4.0	1.5	0.270	0.020	0.050	<0.010
16...	0.010	0.020	5.9	5.9	1.8	0.180	<0.020	<0.010	<0.010
JUN									
15...	0.020	0.020	5.1	5.1	1.9	0.240	0.020	0.040	<0.010
29...	0.820	0.800	6.2	7.0	2.4	1.80	1.60	1.60	1.50
JUL									
17...	0.020	0.040	2.1	2.1	2.0	0.370	0.080	0.150	0.090
26...	0.300	0.300	4.1	4.4	3.1	1.20	1.00	1.10	1.00
AUG									
01...	0.010	0.010	3.9	3.9	1.8	0.300	0.020	0.070	0.010
11...	0.140	0.120	4.0	4.1	3.0	1.30	1.10	1.10	1.00
14...	0.300	--	2.5	2.8	--	0.760	--	0.660	--
15...	0.330	--	2.4	2.7	--	0.810	--	0.720	--
SEP									
14...	0.200	0.210	2.9	3.1	2.3	0.460	0.320	0.350	0.300
28...	0.930	0.920	2.6	3.5	2.9	0.730	0.650	0.660	0.630

ST. JOHNS RIVER

OKLAWAHA RIVER BASIN

02237701 APOPKA-BEAUCLAIR CANAL BELOW DAM, NEAR ASTATULA, FL

LOCATION.--Lat 28°43'22", long 81°41'06", in NW¼ sec.26, T.20 S., R.26 E., Lake County, Hydrologic Unit 3080102, near left bank at downstream end of lock, 300 ft upstream from bridge on county road 48, and 2.5 mi east of Astatula.

DRAINAGE AREA.--184 mi^2.

PERIOD OF RECORD.--January 1957 to current year (gage heights only). Records of gage heights prior to October 1962 are unpublished and available in files of the Orlando Subdistrict office. Prior to October 1967, published as Apopka-Beauclair Canal near Astatula (auxiliary).

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929. Prior to July 14, 1958, nonrecording gage at same site and datum.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 65.93 ft, Mar. 14, 1958; minimum, 60.59 ft, Feb. 19, 1957.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 63.46 ft, Feb. 8; minimum, 62.39 ft, June 16.

GAGE HEIGHT, IN FEET ABOVE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	62.87	62.61	62.87	62.89	63.28	63.12	63.08	62.97	62.50	62.88	62.63	62.76
2	62.85	62.60	62.85	62.90	63.35	63.21	63.02	63.00	62.48	62.87	62.63	62.75
3	62.87	62.58	62.82	62.91	63.36	63.22	62.97	62.97	62.47	62.87	62.65	62.75
4	62.91	62.58	62.80	62.93	63.38	63.22	62.97	62.93	62.46	62.87	62.69	62.76
5	62.90	62.62	62.81	62.89	63.39	63.23	63.09	62.89	62.44	62.86	62.66	62.75
6	62.89	62.65	62.79	62.87	63.39	63.22	63.10	62.88	62.44	62.84	62.64	62.74
7	62.86	62.64	62.78	62.87	63.41	63.25	63.06	62.87	62.45	62.81	62.62	62.76
8	62.84	62.63	62.79	62.87	63.42	63.25	63.05	62.83	62.49	62.78	62.60	62.76
9	62.79	62.62	62.79	62.87	63.42	63.24	63.03	62.78	62.51	62.74	62.60	62.74
10	62.78	62.61	62.80	62.88	63.39	63.21	63.01	62.77	62.53	62.69	62.60	62.72
11	62.76	62.61	62.83	62.88	63.37	63.17	63.02	62.79	62.53	62.66	62.60	62.72
12	62.77	62.61	62.89	62.86	63.35	63.15	62.98	62.75	62.51	62.62	62.65	62.71
13	62.78	62.61	62.87	62.87	63.30	63.16	62.94	62.72	62.49	62.60	62.76	62.69
14	62.74	62.61	62.85	62.87	63.21	63.16	62.91	62.73	62.48	62.58	62.73	62.67
15	62.71	62.60	62.84	62.87	63.20	63.16	62.96	62.72	62.45	62.57	62.72	62.66
16	62.70	62.58	62.85	62.88	63.20	63.16	63.01	62.71	62.44	62.56	62.71	62.67
17	62.70	62.59	62.86	62.89	63.20	63.16	62.99	62.68	62.48	62.54	62.69	62.73
18	62.69	62.60	62.86	62.87	63.19	63.15	62.97	62.66	62.47	62.54	62.67	62.73
19	62.68	62.58	62.84	62.86	63.18	63.16	62.96	62.62	62.49	62.56	62.66	62.72
20	62.68	62.57	62.83	62.86	63.13	63.13	62.96	62.59	62.49	62.57	62.68	62.70
21	62.67	62.60	62.84	62.95	63.11	63.13	62.97	62.60	62.52	62.58	62.69	62.68
22	62.69	62.67	62.85	63.13	63.18	63.12	62.94	62.61	62.66	62.58	62.69	62.66
23	62.67	63.06	62.85	63.15	63.20	63.12	62.91	62.60	62.66	62.62	62.69	62.73
24	62.65	63.04	62.85	63.14	63.17	63.14	62.90	62.59	62.72	62.65	62.68	62.73
25	62.66	63.02	62.86	63.13	63.14	63.13	62.89	62.58	62.76	62.65	62.67	62.72
26	62.62	63.00	62.87	63.12	63.11	63.12	62.89	62.56	62.73	62.64	62.68	62.75
27	62.60	63.00	62.86	63.14	63.09	63.10	62.87	62.54	62.70	62.62	62.67	62.77
28	62.60	62.97	62.85	63.15	63.08	63.08	62.87	62.53	62.72	62.62	62.66	62.76
29	62.60	62.91	62.87	63.16	---	63.05	62.85	62.54	62.84	62.62	62.66	62.74
30	62.60	62.87	62.87	63.16	---	63.03	62.89	62.53	62.86	62.62	62.64	62.72
31	62.60	---	62.88	63.19	---	63.06	---	62.52	---	62.64	62.65	---
MEAN	62.73	62.71	62.84	62.97	63.26	63.16	62.97	62.71	62.56	62.67	62.66	62.72
MAX	62.91	63.06	62.89	63.19	63.42	63.25	63.10	63.00	62.86	62.88	62.76	62.77
MIN	62.60	62.57	62.78	62.86	63.08	63.03	62.85	62.52	62.44	62.54	62.60	62.66

CAL YR 1988 MEAN 62.87 MAX 64.38 MIN 62.23
WTR YR 1989 MEAN 62.83 MAX 63.42 MIN 62.44

OKLAWAHA RIVER BASIN

02238000 HAINES CREEK AT LISBON, FL

LOCATION.--Lat 28°52'14", long 81°47'02", in NW¼ sec.2, T.19 S., R.25 E., Lake County, Hydrologic Unit 03080102, on left bank at upstream side of Burrell lock and dam, 900 ft upstream from bridge on State Highway 44, 0.2 mi south of Lisbon, and 7 mi northeast of Leesburg.

DRAINAGE AREA.--648 mi^2.

PERIOD OF RECORD.--July 1942 to September 1978, October 1978 to September 1985 (gage heights only), October 1985 to current year.

REVISED RECORDS.--WDR FL-72-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929. Prior to Aug. 22, 1956, nonrecording gage at site 1,000 ft downstream at datum 58.93 ft higher and Aug. 22, 1956, to Mar. 5, 1957, at present datum. Mar. 6 to Oct. 8, 1957, nonrecording gage at present site and datum. Mar. 6 to Oct. 8, 1957, auxiliary nonrecording gage and since Oct. 9, 1957, auxiliary water-stage recorder at downstream side of lock and dam at present datum.

REMARKS.--Records fair. Since Dec. 23, 1956, flow regulated at station by manipulation of gates in spillway. Discharge computed from relation between discharge, head, gate openings, and lockages.

COOPERATION.--Gate-opening record provided by St. Johns River Water Management District.

AVERAGE DISCHARGE.--14 years (water years 1943-56), 292 ft^3/s, 6.20 in/yr; 26 years (water years 1957-78, 1986-89), 237 ft^3/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 1,490 ft^3/s, Mar. 30, 1987; maximum gage height, 64.50 ft, Apr. 5,7,8, 1960; no flow Sept. 21 to Dec. 22, 1956, result of temporary coffer dam upstream; mimimum gage height, 56.84 ft, Jan. 20, 1957, former site and present datum; minimum discharge prior to closure of coffer dam, 66 ft^3/s, Sept. 18, 1956, gage height, 58.54 ft, former site and present datum. Minimum daily discharge after closure of lock and dam, gates closed and no flow for many days in 1975, Oct. 18-22, 1986; minimum gage height, 60.30 ft, Mar. 12, 1957.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of 1926 reached a stage of about 65.3 ft, former site and present datum, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 702 ft^3/s, July 6; maximum gage height, 63.15 ft, Feb. 6, Mar. 6; minimum daily discharge, 28 ft^3/s, Nov. 21; minimum gage height, 62.24 ft, June 6, affected by wind.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	81	29	58	85	158	71	172	179	60	413	87	69
2	81	31	58	87	156	81	171	229	58	412	87	70
3	83	31	59	81	163	94	164	221	55	414	90	82
4	81	34	61	78	162	99	114	215	52	423	87	75
5	74	37	56	80	162	105	193	213	47	537	89	65
6	64	35	56	83	169	101	240	210	47	702	88	65
7	57	32	61	88	255	90	242	197	49	699	77	64
8	54	32	60	85	303	79	237	182	57	686	77	63
9	59	33	63	84	283	70	231	182	67	674	75	64
10	56	32	61	77	278	71	224	176	66	544	73	66
11	57	33	62	78	283	80	201	172	63	345	71	57
12	56	34	58	81	280	87	193	166	56	341	79	56
13	48	34	63	84	206	84	148	166	56	332	100	52
14	42	31	68	84	82	84	83	168	52	201	97	51
15	46	29	70	87	83	85	98	160	52	126	75	54
16	47	32	72	85	81	85	110	158	48	123	57	57
17	43	32	66	77	79	83	103	152	56	82	53	58
18	43	31	63	75	73	88	104	143	54	64	49	53
19	43	35	65	76	74	86	103	138	49	69	53	51
20	44	36	67	73	79	82	100	139	49	73	56	47
21	43	28	74	77	85	81	91	134	54	78	57	44
22	42	78	72	109	84	81	95	133	73	79	58	49
23	40	246	74	130	69	81	96	133	75	93	56	58
24	36	266	74	139	66	78	90	128	99	88	55	57
25	35	269	74	142	62	77	88	121	101	86	52	58
26	35	277	79	143	70	78	83	117	148	84	53	67
27	35	271	76	154	72	75	79	122	220	82	54	72
28	34	144	83	157	71	144	79	120	219	82	54	65
29	38	62	82	157	---	193	78	123	320	88	52	67
30	34	64	82	158	---	196	84	116	410	85	47	71
31	31	---	86	158	---	186	---	81	---	88	53	---
TOTAL	1562	2358	2103	3152	3988	2975	4094	4894	2812	8193	2111	1827
MEAN	50.4	78.6	67.8	102	142	96.0	136	158	93.7	264	68.1	60.9
MAX	83	277	86	158	303	196	242	229	410	702	100	82
MIN	31	28	56	73	62	70	78	81	47	64	47	44

CAL YR 1988 TOTAL 80379 MEAN 220 MAX 1470 MIN 20
WTR YR 1989 TOTAL 40069 MEAN 110 MAX 702 MIN 28

ST. JOHNS RIVER

OKLAWAHA RIVER BASIN

02238000 HAINES CREEK AT LISBON, FL--Continued

GAGE HEIGHT, IN FEET ABOVE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	62.78	62.50	62.69	62.80	63.10	62.99	62.90	62.89	62.44	62.65	62.57	62.69
2	62.78	62.50	62.68	62.80	63.10	63.05	62.89	62.86	62.43	62.64	62.57	62.67
3	62.81	62.51	62.68	62.80	63.12	63.09	62.88	62.83	62.40	62.65	62.58	62.72
4	62.80	62.55	62.68	62.78	63.11	63.10	62.90	62.81	62.38	62.67	62.57	62.70
5	62.76	62.57	62.67	62.79	63.11	63.13	63.00	62.80	62.38	62.62	62.56	62.67
6	62.71	62.54	62.67	62.80	63.14	63.13	62.95	62.78	62.38	62.52	62.55	62.67
7	62.68	62.52	62.69	62.80	63.11	63.09	62.95	62.74	62.39	62.51	62.53	62.67
8	62.65	62.51	62.69	62.80	63.09	63.04	62.92	62.70	62.43	62.47	62.52	62.66
9	62.67	62.51	62.70	62.80	63.03	63.00	62.90	62.70	62.48	62.44	62.52	62.65
10	62.67	62.51	62.69	62.77	63.01	63.00	62.89	62.68	62.45	62.44	62.51	62.65
11	62.68	62.50	62.70	62.78	63.02	63.02	62.82	62.66	62.43	62.47	62.50	62.63
12	62.67	62.50	62.69	62.79	63.01	63.05	62.79	62.64	62.42	62.45	62.52	62.62
13	62.63	62.50	62.71	62.80	63.03	63.05	62.79	62.62	62.42	62.43	62.62	62.60
14	62.60	62.50	62.73	62.79	63.04	63.05	62.82	62.63	62.40	62.47	62.62	62.60
15	62.60	62.49	62.74	62.80	63.04	63.05	62.89	62.62	62.40	62.47	62.63	62.61
16	62.60	62.51	62.74	62.80	63.03	63.05	62.92	62.61	62.38	62.45	62.62	62.61
17	62.60	62.51	62.72	62.77	63.00	63.05	62.91	62.59	62.40	62.45	62.60	62.63
18	62.60	62.50	62.71	62.76	62.98	63.05	62.91	62.56	62.39	62.46	62.58	62.61
19	62.60	62.51	62.72	62.76	62.99	63.04	62.91	62.53	62.39	62.49	62.59	62.60
20	62.60	62.51	62.73	62.75	63.01	63.04	62.89	62.52	62.39	62.51	62.61	62.58
21	62.60	62.48	62.75	62.78	63.05	63.04	62.86	62.50	62.41	62.53	62.63	62.56
22	62.58	62.47	62.75	62.92	63.05	63.03	62.85	62.52	62.51	62.52	62.63	62.59
23	62.56	62.67	62.76	63.00	62.99	63.05	62.85	62.52	62.52	62.58	62.62	62.63
24	62.56	62.73	62.76	63.03	62.96	63.02	62.85	62.50	62.61	62.58	62.62	62.62
25	62.52	62.73	62.76	63.04	62.95	63.00	62.84	62.47	62.61	62.57	62.60	62.64
26	62.52	62.75	62.76	63.05	62.97	63.00	62.82	62.45	62.60	62.56	62.59	62.68
27	62.53	62.74	62.76	63.08	62.99	63.00	62.80	62.45	62.58	62.55	62.59	62.70
28	62.52	62.72	62.79	63.09	62.98	62.99	62.78	62.44	62.58	62.55	62.61	62.67
29	62.52	62.70	62.79	63.09	---	62.96	62.77	62.46	62.63	62.55	62.60	62.68
30	62.51	62.71	62.79	63.10	---	62.99	62.81	62.45	62.65	62.53	62.58	62.68
31	62.51	---	62.80	63.10	---	62.96	---	62.46	---	62.58	62.61	---
MEAN	62.63	62.56	62.73	62.87	63.04	63.04	62.87	62.61	62.46	62.53	62.58	62.64
MAX	62.81	62.75	62.80	63.10	63.14	63.13	63.00	62.89	62.65	62.67	62.63	62.72
MIN	62.51	62.47	62.67	62.75	62.95	62.96	62.77	62.44	62.38	62.43	62.50	62.56

CAL YR 1988 MEAN 62.59 MAX 63.07 MIN 62.20
WTR YR 1989 MEAN 62.71 MAX 63.14 MIN 62.38

ST. JOHNS RIVER

OKLAWAHA RIVER BASIN

02238001 HAINES CREEK BELOW BURRELL DAM, AT LISBON, FL

LOCATION.--Lat 28°52'16", long 81°47'04", in NW¼ sec.2, T.19 S., R.25 E., Lake County, Hydrologic Unit 03080102, on left bank at downstream side of Burrell lock and dam, 750 ft upstream from bridge on State Highway 44, 0.2 mi south of Lisbon, and 7 mi northeast of Leesburg.

DRAINAGE AREA.--648 mi^2.

PERIOD OF RECORD.--March 1957 to current year (gage heights only). Records of gage heights prior to October 1962 are unpublished and available in files of the Orlando Subdistrict office. Prior to October 1967, published as Haines Creek at Lisbon (auxiliary).

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929. Prior to Oct. 9, 1957, nonrecording gage at same site and datum.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 61.48 ft, Oct. 9, 1960; minimum observed, 52.90 ft, June 26,28, 1984, result of drawdown of Lake Griffin.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 59.40 ft, Feb. 8; minimum, 58.27 ft, Nov. 21, affected by wind.

GAGE HEIGHT, IN FEET ABOVE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	58.82	58.43	58.78	58.86	59.20	59.04	59.07	58.95	58.66	59.07	58.69	58.75
2	58.81	58.42	58.76	58.87	59.20	59.16	59.04	58.93	58.64	59.08	58.68	58.79
3	58.82	58.40	58.74	58.89	59.20	59.20	59.03	58.89	58.62	59.08	58.71	58.78
4	58.84	58.43	58.74	58.87	59.22	59.20	59.05	58.86	58.60	59.07	58.68	58.77
5	58.82	58.45	58.72	58.85	59.24	59.21	59.20	58.85	58.59	59.12	58.68	58.76
6	58.79	58.44	58.72	58.85	59.27	59.22	59.23	58.83	58.60	59.22	58.67	58.77
7	58.76	58.43	58.72	58.85	59.27	59.23	59.21	58.80	58.61	59.16	58.66	58.78
8	58.73	58.41	58.72	58.85	59.31	59.20	59.15	58.73	58.64	59.10	58.63	58.80
9	58.71	58.40	58.73	58.86	59.27	59.20	59.11	58.70	58.65	59.02	58.65	58.81
10	58.70	58.40	58.72	58.87	59.22	59.17	59.08	58.69	58.64	58.85	58.67	58.82
11	58.68	58.39	58.75	58.88	59.20	59.16	59.03	58.67	58.63	58.67	58.67	58.81
12	58.66	58.38	58.78	58.88	59.17	59.16	58.99	58.63	58.62	58.66	58.72	58.79
13	58.61	58.38	58.81	58.89	59.13	59.16	58.96	58.61	58.61	58.63	58.83	58.78
14	58.59	58.38	58.78	58.89	59.09	59.15	58.94	58.61	58.59	58.55	58.86	58.77
15	58.58	58.36	58.78	58.89	59.08	59.15	58.99	58.61	58.58	58.51	58.86	58.76
16	58.57	58.36	58.79	58.90	59.09	59.14	59.01	58.60	58.56	58.50	58.84	58.76
17	58.56	58.36	58.80	58.89	59.08	59.14	59.00	58.60	58.59	58.48	58.80	58.77
18	58.55	58.34	58.77	58.89	59.08	59.13	59.01	58.57	58.58	58.49	58.78	58.77
19	58.55	58.34	58.76	58.88	59.08	59.13	59.00	58.56	58.58	58.52	58.77	58.78
20	58.55	58.34	58.76	58.88	59.06	59.12	58.99	58.56	58.58	58.57	58.82	58.76
21	58.55	58.33	58.77	58.93	59.06	59.12	58.98	58.57	58.62	58.65	58.85	58.76
22	58.54	58.34	58.77	59.11	59.12	59.10	58.96	58.58	58.77	58.65	58.83	58.75
23	58.52	58.73	58.78	59.15	59.15	59.10	58.95	58.58	58.78	58.73	58.82	58.77
24	58.51	58.79	58.80	59.11	59.08	59.10	58.94	58.56	58.80	58.74	58.79	58.77
25	58.49	58.81	58.80	59.13	59.04	59.09	58.93	58.54	58.79	58.74	58.76	58.79
26	58.48	58.82	58.80	59.13	59.02	59.06	58.92	58.53	58.78	58.71	58.73	58.80
27	58.47	58.86	58.81	59.12	59.00	59.04	58.91	58.51	58.78	58.69	58.72	58.80
28	58.46	58.85	58.83	59.15	59.01	59.06	58.89	58.53	58.76	58.67	58.71	58.81
29	58.45	58.78	58.83	59.17	---	59.08	58.88	58.66	58.89	58.65	58.69	58.82
30	58.44	58.78	58.84	59.18	---	59.09	58.88	58.68	59.05	58.63	58.67	58.80
31	58.44	---	58.85	59.19	---	59.11	---	58.68	---	58.66	58.67	---
MEAN	58.61	58.50	58.77	58.96	59.14	59.14	59.01	58.67	58.67	58.77	58.74	58.78
MAX	58.84	58.86	58.85	59.19	59.31	59.23	59.23	58.95	59.05	59.22	58.86	58.82
MIN	58.44	58.33	58.72	58.85	59.00	59.04	58.88	58.51	58.56	58.48	58.63	58.75

CAL YR 1988	MEAN 58.79	MAX 60.11	MIN 58.06
WTR YR 1989	MEAN 58.81	MAX 59.31	MIN 58.33

OKLAWAHA RIVER BASIN

02238499 OKLAWAHA RIVER ABOVE MOSS BLUFF DAM, AT MOSS BLUFF, FL

LOCATION.--Lat 29°04'52", long 81°52'51", in SW¼ sec.23, T.16 S., R.24 E., Marion County, Hydrologic Unit 03080102, at upstream side of spillway structure of Moss Bluff Dam, 0.3 mi upstream from bridge on State Highway 464, 0.4 mi southwest of Moss Bluff, 3.9 mi northeast of Oklawaha, and 64.3 mi upstream from mouth.

DRAINAGE AREA.--879 mi^2.

PERIOD OF RECORD.--October 1965 to June 1967 and October 1969 to current year (gage heights only).

REVISED RECORDS.--WDR FL-74-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929. Oct. 20, 1965, to June 8, 1967, at datum 0.12 ft lower and Oct. 1, 1969, to Mar. 5, 1971, at datum 0.30 ft higher. This is the auxiliary gage for station 02238500 located at downstream side of spillway structure.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 60.10 ft, present datum, Dec. 10, 1969; minimum, 45.45 ft, Mar. 6, 1973, result of dike failure.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 59.30 ft, Feb. 6; minimum, 57.97 ft, Nov. 23.

GAGE HEIGHT, IN FEET ABOVE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	58.73	58.36	58.64	58.78	59.12	58.90	59.00	58.91	58.59	58.73	58.55	58.68
2	58.72	58.36	58.64	58.77	59.12	59.03	58.99	58.72	58.61	58.78	58.59	58.73
3	58.77	58.33	58.65	58.78	59.15	59.14	58.95	58.72	58.58	58.77	58.60	58.74
4	58.74	58.42	58.65	58.70	59.15	59.14	58.96	58.73	58.53	58.78	58.59	58.70
5	58.68	58.53	58.63	58.76	59.16	59.19	59.11	58.75	58.57	58.75	58.57	58.68
6	58.62	58.40	58.65	58.79	59.18	59.15	58.91	58.70	58.54	58.53	58.59	58.69
7	58.59	58.40	58.68	58.77	59.19	59.11	59.07	58.64	58.63	58.46	58.55	58.71
8	58.14	58.38	58.66	58.78	59.13	59.09	58.98	58.70	58.64	58.42	58.56	58.73
9	58.60	58.35	58.68	58.77	59.01	58.96	58.98	58.55	58.57	58.35	58.58	58.74
10	58.60	58.35	58.65	58.72	59.03	59.01	58.95	58.57	58.57	58.30	58.58	58.76
11	58.63	58.35	58.65	58.73	59.05	59.04	58.81	58.53	58.54	58.44	58.57	58.75
12	58.58	58.33	58.59	58.77	59.02	59.08	58.78	58.49	58.51	58.45	58.63	58.73
13	58.48	58.32	58.69	58.78	59.04	59.01	58.76	58.51	58.59	58.39	58.74	58.72
14	58.47	58.30	58.72	58.77	59.07	59.09	58.84	58.52	58.49	58.39	58.76	58.73
15	58.50	58.31	58.72	58.80	59.05	59.08	58.93	58.51	58.55	58.45	58.78	58.75
16	58.49	58.28	58.71	58.79	59.03	59.06	58.95	58.49	58.66	58.41	58.76	58.72
17	58.48	58.30	58.70	58.75	58.97	59.05	58.91	58.50	58.53	58.44	58.73	58.71
18	58.50	58.26	58.68	58.77	58.95	59.05	58.92	58.47	58.52	58.48	58.70	58.69
19	58.50	58.29	58.71	58.77	58.95	59.06	58.93	58.47	58.54	58.50	58.69	58.69
20	58.49	58.29	58.71	58.75	59.00	59.05	58.91	58.45	58.51	58.50	58.73	58.68
21	58.52	58.21	58.71	58.70	59.06	59.08	58.85	58.48	58.54	58.62	58.78	58.65
22	58.44	58.16	58.70	58.82	59.00	59.05	58.85	58.49	58.67	58.57	58.78	58.73
23	58.47	58.39	58.72	58.97	58.93	59.05	58.87	58.47	58.67	58.65	58.76	58.73
24	58.48	58.57	58.73	59.02	58.94	59.03	58.85	58.49	58.68	58.61	58.73	58.70
25	58.35	58.65	58.73	59.03	58.92	58.99	58.84	58.45	58.68	58.63	58.69	58.75
26	58.46	58.72	58.72	59.07	58.94	58.96	58.85	58.43	58.65	58.61	58.66	58.77
27	58.42	58.75	58.74	59.07	58.97	58.97	58.76	58.42	58.61	58.57	58.63	58.73
28	58.40	58.70	58.76	59.07	58.96	58.94	58.80	58.45	58.65	58.55	58.64	58.74
29	58.38	58.67	58.74	59.09	---	58.96	58.80	58.55	58.64	58.55	58.62	58.76
30	58.36	58.67	58.76	59.12	---	59.04	58.78	58.58	58.76	58.52	58.60	58.78
31	58.30	---	58.77	59.10	---	59.01	---	58.60	---	58.55	58.57	---
MEAN	58.51	58.41	58.69	58.85	59.04	59.04	58.90	58.56	58.59	58.54	58.66	58.72
MAX	58.77	58.75	58.77	59.12	59.19	59.19	59.11	58.91	58.76	58.78	58.78	58.78
MIN	58.14	58.16	58.59	58.70	58.92	58.90	58.76	58.42	58.49	58.30	58.55	58.65

CAL YR 1988 MEAN 58.60 MAX 59.23 MIN 57.98
WTR YR 1989 MEAN 58.71 MAX 59.19 MIN 58.14

ST. JOHNS RIVER

OKLAWAHA RIVER BASIN

02238500 OKLAWAHA RIVER AT MOSS BLUFF, FL

LOCATION.--Lat 29°04'52", long 81°52'51", in SW¼ sec.23, T.16 S., R.24 E., Marion County, Hydrologic Unit 03080102, at downstream side of spillway structure of Moss Bluff Dam, 0.3 mi upstream from bridge on State Highway 464, 0.4 mi southwest of Moss Bluff, 3.9 mi northeast of Oklawaha, and 64.3 mi upstream from mouth.

DRAINAGE AREA.--879 mi^2.

PERIOD OF RECORD.--February to September 1943 (discharge measurements only), October 1943 to September 1955, April 1956 and March 1958 to July 1967 (discharge measurements only), August 1967 to current year.

REVISED RECORDS.--WDR FL-74-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929. Prior to Aug. 12, 1943, nonrecording gage and Aug. 12, 1943, to Sept. 30, 1955, water-stage recorder at site 0.3 mi downstream at datum 0.12 ft lower; Aug. 11, 1967, to Sept. 30, 1969, water-stage recorder at site 0.3 mi downstream at present datum. Auxiliary gage at upstream side of spillway structure.

REMARKS.--Records fair. Flow regulated by manipulation of gates in spillway. Discharge computed from relation between discharge, gate openings, and lockages.

COOPERATION.--Gate-opening record provided by St. Johns River Water Management District.

AVERAGE DISCHARGE.--34 years (water years 1944-55, 1968-89), 277 ft^3/s, 200,700 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 2,340 ft^3/s, Feb. 20, 1983; maximum gage height, 50.71 ft, present datum, Sept. 12, 1960, from U.S. Army Corps of Engineers records; gates closed and no flow for many days in 1973-74; minimum gage height, 34.04 ft, Dec. 1, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 945 ft^3/s, July 9; maximum daily gage height, 40.72 ft, July 8; minimum daily discharge, 8.6 ft^3/s, May 31; minimum daily gage height, 34.86 ft, June 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	123	26	26	42	29	35	73	53	36	434	27	126
2	123	26	26	43	28	25	73	250	24	440	27	41
3	123	25	34	25	29	27	50	248	46	442	34	46
4	123	30	34	24	41	40	58	247	46	441	38	47
5	123	25	28	27	38	43	50	253	24	424	41	28
6	123	34	24	27	34	25	304	264	25	932	47	27
7	123	29	26	37	29	28	302	263	25	931	27	24
8	123	24	25	39	355	24	364	252	24	940	31	24
9	123	29	26	30	353	24	371	256	32	945	24	34
10	123	28	31	30	352	29	362	251	45	653	24	49
11	123	28	24	29	359	37	352	248	46	464	27	25
12	129	37	24	28	362	43	250	252	24	459	43	25
13	128	40	26	28	356	29	252	70	27	458	41	27
14	132	28	24	38	26	34	50	65	32	458	27	28
15	40	31	26	43	29	30	53	53	33	142	28	24
16	43	28	26	32	34	30	68	54	24	141	129	45
17	28	31	24	32	32	27	54	29	44	142	131	44
18	24	28	24	29	33	41	49	29	49	32	126	24
19	30	35	24	25	38	47	55	33	32	29	137	29
20	29	36	24	27	38	25	62	46	29	33	137	24
21	26	29	24	27	27	32	51	47	31	37	131	24
22	40	24	26	24	24	34	68	24	31	41	134	32
23	37	24	26	27	24	24	72	32	32	43	135	29
24	29	24	28	32	24	39	58	27	192	27	131	32
25	29	39	26	29	24	47	59	27	193	186	123	24
26	30	41	43	28	29	47	55	24	178	181	142	27
27	28	35	35	30	37	33	51	46	307	185	140	24
28	28	26	40	36	34	42	50	46	305	188	126	28
29	37	28	35	46	---	62	68	47	305	197	130	28
30	39	26	35	24	---	58	68	27	423	197	123	39
31	30	---	34	27	---	47	---	8.6	---	176	127	---
TOTAL	2289	894	878	965	2818	1108	3852	3571.6	2664	10398	2588	1028
MEAN	73.8	29.8	28.3	31.1	101	35.7	128	115	88.8	335	83.5	34.3
MAX	132	41	43	46	362	62	371	264	423	945	142	126
MIN	24	24	24	24	24	24	49	8.6	24	27	24	24
AC-FT	4540	1770	1740	1910	5590	2200	7640	7080	5280	20620	5130	2040

CAL YR 1988 TOTAL 76654 MEAN 209 MAX 1540 MIN 23 AC-FT 152000
WTR YR 1989 TOTAL 33053.6 MEAN 90.6 MAX 945 MIN 8.6 AC-FT 65560

02238500 OKLAWAHA RIVER AT MOSS BLUFF, FL--Continued

GAGE HEIGHT, IN FEET ABOVE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	37.57	36.70	38.59	36.20	35.89	36.01	35.70	35.65	34.99	37.78	35.69	35.78
2	37.51	36.63	38.55	36.20	35.85	36.36	35.72	38.47	35.02	37.82	35.31	35.50
3	37.52	36.59	38.53	36.17	35.83	36.42	35.71	37.27	34.97	37.80	35.18	35.43
4	37.62	36.54	38.52	36.12	35.85	36.47	35.65	37.10	35.02	37.76	35.18	35.44
5	37.56	36.52	36.50	36.06	35.86	36.42	36.10	37.00	35.00	37.81	35.20	35.41
6	37.49	36.64	36.47	36.04	35.83	36.36	37.76	37.04	34.98	40.31	35.18	35.50
7	37.43	36.60	36.45	36.03	36.53	36.30	37.78	36.99	35.03	40.58	35.16	35.75
8	37.30	36.50	36.42	36.04	37.49	36.24	37.95	36.97	35.02	40.72	35.12	35.67
9	37.35	36.53	36.42	36.02	37.74	36.18	37.96	36.88	34.97	40.70	35.11	35.57
10	37.32	36.53	36.42	35.98	37.82	36.19	37.95	36.98	34.95	40.70	35.14	35.52
11	37.32	36.51	36.44	35.95	37.87	36.13	37.96	37.09	34.96	38.60	35.10	35.37
12	37.31	36.50	36.53	35.92	37.88	36.10	37.50	37.06	34.95	37.95	35.27	35.28
13	37.28	36.50	36.55	35.90	37.62	36.11	37.34	35.87	34.86	38.44	35.68	35.22
14	37.20	36.51	36.52	35.93	36.59	36.08	36.26	35.63	34.95	38.16	35.69	35.18
15	36.97	36.49	36.48	35.94	36.21	36.05	36.06	35.53	34.96	36.62	35.72	35.15
16	36.89	36.47	36.45	35.91	36.10	35.99	36.14	35.41	34.94	36.30	35.83	35.22
17	36.80	36.45	36.45	35.87	36.03	35.97	36.11	35.27	34.89	36.14	35.91	35.29
18	36.73	36.42	36.40	35.85	36.00	35.93	35.90	35.19	34.95	35.30	35.88	35.29
19	36.72	36.43	36.37	35.82	36.00	35.95	35.83	35.18	35.02	34.98	35.99	35.30
20	36.69	36.44	36.35	35.88	35.97	35.95	35.75	35.18	34.97	34.94	36.08	35.25
21	36.68	36.44	36.38	35.96	35.92	35.90	35.74	35.21	35.02	35.10	36.15	35.20
22	36.70	36.49	36.33	36.13	36.03	35.89	35.70	35.21	35.05	35.56	36.10	35.24
23	36.69	36.93	36.35	36.23	36.04	35.88	35.70	35.15	35.06	35.62	36.01	35.63
24	36.65	36.82	36.32	36.21	35.98	35.91	35.71	35.14	36.20	35.72	36.17	35.84
25	36.63	36.74	36.29	36.15	35.94	35.92	35.64	35.12	36.37	36.28	36.09	36.06
26	36.61	36.68	36.30	36.07	35.91	35.94	35.59	35.10	36.37	36.31	36.16	35.99
27	36.59	38.62	36.31	36.07	35.91	35.91	35.56	35.07	36.91	36.47	36.14	35.88
28	36.58	38.72	36.30	36.03	35.94	35.88	35.49	35.13	36.95	36.43	35.89	35.96
29	36.57	38.67	36.26	36.05	---	35.75	35.47	35.14	36.98	36.32	35.63	35.84
30	36.56	38.67	36.23	35.98	---	35.68	35.55	35.18	37.63	36.37	35.59	35.77
31	36.61	---	36.20	35.94	---	35.70	---	34.90	---	36.36	35.78	---
MEAN	37.01	36.84	36.67	36.02	36.38	36.05	36.31	35.94	35.40	37.29	35.65	35.52
MAX	37.62	38.72	38.59	36.23	37.88	36.47	37.96	38.47	37.63	40.72	36.17	36.06
MIN	36.56	36.42	36.20	35.82	35.83	35.68	35.47	34.90	34.86	34.94	35.10	35.15

CAL YR 1988 MEAN 37.21 MAX 43.99 MIN 35.02
WTR YR 1989 MEAN 36.26 MAX 40.72 MIN 34.86

OKLAWAHA RIVER BASIN

02239500 SILVER SPRINGS NEAR OCALA, FL

LOCATION.--Lat 29°12'44", long 82°03'15", in SE¼ sec.1, T.15 S., R.23 E., Marion County, Hydrologic Unit 03080102, in canal at glass bottom boat docking shed, 1,400 ft downstream from head of springs, and 5.3 mi northeast of Ocala.

DRAINAGE AREA.--Indeterminate.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1906 to December 1907 (gage heights only), October 1932 to September 1947 (monthly discharge only, prior to January 1933, published in WSP 1304), October 1947 to current year.

GAGE.--Water-stage recorder. Datum of gage is 38.96 ft above National Geodetic Vertical Datum of 1929. Prior to Feb. 20, 1947, nonrecording gage at same site and datum. Feb. 20, 1947, to May 23, 1974, at site 800 ft north at same datum.

REMARKS.--Records fair. Discharge measurements made 4 to 5 mi downstream from head of springs; surface inflow between head of springs and measuring site is subtracted when measureable. Prior to Nov. 20, 1959, measurements made at site 0.7 mi downstream from head of springs. Discharge computed from relation between artesian pressure at Sharpes Ferry Well and discharge at measuring site. Artesian pressures are published as water levels for Sharpes Ferry Well (291115081592501) in Volume 1B: Northeast Florida, Ground Water.

AVERAGE DISCHARGE.--57 years (water years 1933-89), 811 ft^3/s, 524 mgd.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 1,290 ft^3/s, Oct. 7, 13-17, 20, 1960; maximum gage height observed, 5.50 ft, Sept. 6, 1933; minimum daily discharge, 539 ft^3/s, May 7, 1957; minimum gage height, -0.99 ft, June 22,23, 1956.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 951 ft^3/s, Oct. 3,11; maximum gage height, 2.16 ft, Oct. 3; minimum daily discharge, 685 ft^3/s, July 6; minimum gage height, 0.32 ft, all or part of each day June 16-18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	943	935	896	868	826	792	765	744	701	698	700	702
2	948	929	891	860	823	797	763	741	703	699	701	704
3	951	928	892	847	822	800	765	737	704	697	703	704
4	949	935	894	843	821	795	766	736	702	689	704	703
5	944	936	887	839	821	794	767	737	701	687	703	702
6	943	926	881	840	820	798	766	737	704	685	704	705
7	945	918	895	838	818	794	769	735	705	686	703	707
8	947	915	891	841	815	787	768	733	702	688	701	707
9	949	917	891	852	810	785	765	733	700	689	697	707
10	950	919	891	847	812	786	762	735	696	689	696	707
11	951	918	893	847	815	786	759	733	696	688	698	706
12	947	915	889	850	815	790	758	731	696	691	700	705
13	943	914	885	850	812	790	759	730	695	693	704	705
14	942	913	881	847	808	788	760	729	693	691	706	704
15	945	913	881	848	806	785	766	727	692	686	705	704
16	946	913	884	846	804	782	762	725	690	690	703	704
17	945	910	881	842	805	779	757	720	687	701	701	701
18	947	907	874	841	807	781	758	715	688	699	700	695
19	948	908	872	840	805	781	760	714	691	699	701	695
20	946	909	874	842	807	775	759	715	691	701	705	693
21	945	906	877	839	809	767	756	715	689	698	706	695
22	944	908	875	845	807	765	752	717	689	697	704	700
23	941	916	877	839	798	765	749	714	691	698	704	707
24	941	905	878	834	790	762	748	713	695	701	704	706
25	937	901	874	832	790	760	747	710	696	702	703	708
26	935	905	869	831	796	761	747	705	695	703	703	709
27	934	905	861	834	795	759	744	705	695	705	702	707
28	931	901	853	833	787	758	744	706	694	706	700	706
29	929	894	850	830	---	759	741	705	695	704	701	708
30	931	898	857	832	---	762	740	705	695	702	702	710
31	934	---	869	830	---	766	---	703	---	700	701	---
TOTAL	29231	27417	27263	26107	22644	24149	22722	22405	20871	21562	21765	21116
MEAN	943	914	879	842	809	779	757	723	696	696	702	704
MAX	951	936	896	868	826	800	769	744	705	706	706	710
MIN	929	894	850	830	787	758	740	703	687	685	696	693

CAL YR 1988 TOTAL 306942 MEAN 839 MAX 951 MIN 746
WTR YR 1989 TOTAL 287252 MEAN 787 MAX 951 MIN 685

02239500 SILVER SPRINGS NEAR OCALA, FL--Continued

GAGE HEIGHT, IN FEET ABOVE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	2.07	1.76	1.52	1.21	.94	.92	.73	.72	.39	.67	.49	.65
10	2.02	1.70	1.47	1.16	1.10	.85	.91	.70	.37	1.03	.46	.57
15	1.96	1.65	1.45	1.10	.95	.81	.76	.54	.34	.65	.50	.46
20	1.88	1.61	1.38	1.04	.86	.77	.67	.46	.34	.43	.53	.50
25	1.83	1.66	1.34	1.06	.82	.76	.62	.45	.49	.61	.50	.80
EOM	1.79	1.60	1.28	.99	.81	.70	.60	.41	.62	.59	.46	.71
MEAN	1.94	1.68	1.43	1.11	.94	.81	.73	.57	.41	.67	.50	.60
MAX	2.10	1.79	1.58	1.27	1.11	.93	.91	.77	.62	1.03	.55	.80
MIN	1.79	1.60	1.28	.99	.81	.70	.58	.41	.33	.43	.45	.46

CAL YR 1988 MEAN 1.28 MAX 2.66 MIN .29
WTR YR 1989 MEAN .95 MAX 2.10 MIN .33

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1956, 1960, 1962-79, 1981-83, 1989.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	COLOR (PLATINUM-COBALT UNITS)	OXYGEN, DISSOLVED (MG/L)	HARDNESS TOTAL (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)
APR										
13...	1440	466	7.5	23.5	<5	4.0	230	74	10	6.0
SEP										
29...	1147	460	6.8	24.0	<5	--	240	78	9.8	5.8

DATE	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY LAB (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)
APR										
13...	0.60	174	49	8.9	0.20	10	282	<0.010	0.970	0.010
SEP										
29...	0.60	173	49	11	0.20	10	285	<0.010	0.900	<0.010

DATE	NITROGEN,AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOSPHOROUS TOTAL (MG/L AS P)	PHOSPHORUS, ORTHO, TOTAL (MG/L AS P)	ALUMINUM, TOTAL RECOVERABLE (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	COPPER, DISSOLVED (UG/L AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)
APR									
13...	<0.20	0.040	0.040	<10	<1	<1	<1	30	<10
SEP									
29...	<0.20	0.050	0.040	30	1	<1	1	30	10

DATE	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	LEAD, DISSOLVED (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	STRONTIUM, DISSOLVED (UG/L AS SR)	ZINC, DISSOLVED (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)
APR									
13...	<5	<5	<10	<10	0.10	3	680	10	0.3
SEP									
29...	<1	<1	<10	<10	<0.10	<1	700	10	0.3

OKLAHAWA RIVER BASIN

02240000 OKLAWAHA RIVER NEAR CONNER, FL
(National stream-quality accounting network station)

LOCATION.--Lat 29°12'52", long 81°59'10", in SW¼ sec. 2, T.15 S., R.23 E., Marion County, Hydrologic Unit 03080102, on right bank 75 ft upstream from bridge on State Highway 40, 0.2 mi downstream from Silver River, 1.5 mi southwest of Conner, 8 mi east of Ocala, and 51.0 mi upstream from mouth.

DRAINAGE AREA.--1,196 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--February 1930 to September 1946, March 1963 to September 1977 (gage heights only), October 1977 to current year.

REVISED RECORDS.--WDR FL-74-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 31.79 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Some effect from Moss Bluff Dam 13.3 mi upstream.

AVERAGE DISCHARGE.--28 years (water years 1931-46, 1978-89), 1,140 ft^3/s, 12.94 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,430 ft^3/s, Apr. 9, 1982; maximum gage height, 9.14 ft, Sept. 6, 1933; minimum discharge, 622 ft^3/s, Jan. 11, 1982; minimum gage height, 2.26 ft, Nov. 30, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,490 ft^3/s, July 9,10, gage height, 5.91 ft; minimum, 696 ft^3/s, June 12, gage height, 3.01 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1230	1010	988	904	842	850	809	842	715	991	785	783
2	1210	997	978	903	838	909	813	993	714	1000	750	767
3	1220	987	972	896	834	921	808	955	715	1010	739	758
4	1250	984	969	887	834	929	805	933	719	1010	740	764
5	1230	991	962	881	836	925	878	926	716	1020	739	768
6	1200	1000	955	876	833	917	998	927	717	1190	739	783
7	1190	991	950	875	863	902	1030	921	719	1340	734	815
8	1180	982	945	873	983	892	1050	914	716	1420	725	802
9	1170	978	943	872	1040	879	1070	908	713	1460	724	785
10	1160	975	943	864	1060	876	1070	920	712	1470	729	771
11	1160	971	949	857	1070	870	1060	931	713	1260	724	760
12	1150	972	964	854	1080	871	1010	898	706	1110	733	749
13	1140	973	968	849	1070	870	978	818	701	1080	788	739
14	1130	971	963	852	954	863	882	790	705	1030	792	735
15	1080	966	956	855	888	854	863	774	707	900	782	732
16	1060	962	952	850	861	847	865	763	703	846	788	735
17	1040	960	948	844	849	843	849	750	703	811	793	743
18	1030	957	942	841	844	841	828	742	721	747	792	750
19	1020	959	936	838	842	842	821	737	728	718	798	750
20	1020	959	935	843	842	841	814	740	714	718	811	745
21	1010	959	941	853	839	834	807	744	715	734	824	736
22	1010	967	933	878	846	833	805	741	719	792	819	746
23	1010	1070	935	896	842	833	808	734	742	798	806	803
24	1000	1050	929	892	842	836	804	731	820	806	812	829
25	998	1020	922	885	840	839	796	726	837	837	807	867
26	995	1010	921	873	838	841	791	722	842	844	807	850
27	991	1000	923	869	839	836	784	725	883	851	810	831
28	988	1010	922	864	841	828	778	731	904	848	799	840
29	988	1010	916	864	---	818	777	735	925	841	776	824
30	992	1010	911	857	---	812	792	732	968	839	760	813
31	999	---	907	849	---	810	---	712	---	828	773	---
TOTAL	33851	29651	29278	26894	24992	26662	26243	25215	22612	30149	23998	23373
MEAN	1092	988	944	868	893	860	875	813	754	973	774	779
MAX	1250	1070	988	904	1080	929	1070	993	968	1470	824	867
MIN	988	957	907	838	833	810	777	712	701	718	724	732
CFSM	.91	.83	.79	.73	.75	.72	.73	.68	.63	.81	.65	.65
IN.	1.05	.92	.91	.84	.78	.83	.82	.78	.70	.94	.75	.73

CAL YR 1988 TOTAL 403064 MEAN 1101 MAX 2900 MIN 730 CFSM .92 IN. 12.54
WTR YR 1989 TOTAL 322918 MEAN 885 MAX 1470 MIN 701 CFSM .74 IN. 10.04

02240000 OKLAWAHA RIVER NEAR CONNER, FL--Continued
(National stream-quality accounting network station)

GAGE HEIGHT, IN FEET ABOVE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.42	4.84	4.75	4.37	4.05	4.09	3.81	4.00	3.15	4.77	3.64	3.63
2	5.39	4.79	4.71	4.36	4.02	4.39	3.84	4.77	3.14	4.81	3.39	3.51
3	5.41	4.75	4.69	4.33	3.99	4.45	3.80	4.62	3.14	4.83	3.32	3.45
4	5.48	4.74	4.68	4.29	3.99	4.49	3.79	4.52	3.17	4.83	3.32	3.49
5	5.41	4.77	4.65	4.25	4.01	4.47	4.23	4.48	3.15	4.86	3.32	3.52
6	5.36	4.80	4.62	4.23	3.98	4.44	4.79	4.48	3.16	5.33	3.31	3.63
7	5.32	4.76	4.60	4.22	4.14	4.36	4.90	4.46	3.17	5.68	3.28	3.86
8	5.29	4.73	4.57	4.22	4.73	4.31	4.98	4.42	3.15	5.81	3.22	3.77
9	5.27	4.71	4.57	4.21	4.92	4.24	5.02	4.39	3.13	5.87	3.21	3.64
10	5.25	4.70	4.56	4.17	5.00	4.23	5.02	4.45	3.12	5.89	3.24	3.55
11	5.24	4.68	4.59	4.13	5.04	4.20	4.99	4.51	3.13	5.50	3.20	3.46
12	5.23	4.69	4.65	4.12	5.06	4.21	4.84	4.34	3.08	5.12	3.27	3.38
13	5.21	4.69	4.67	4.09	5.03	4.20	4.71	3.88	3.04	5.04	3.66	3.32
14	5.18	4.68	4.65	4.11	4.61	4.16	4.26	3.68	3.07	4.89	3.69	3.28
15	5.06	4.66	4.62	4.12	4.29	4.12	4.16	3.57	3.09	4.35	3.62	3.27
16	5.00	4.65	4.61	4.10	4.16	4.08	4.17	3.49	3.06	4.07	3.67	3.28
17	4.94	4.64	4.59	4.06	4.09	4.05	4.09	3.39	3.06	3.83	3.70	3.34
18	4.89	4.63	4.56	4.04	4.06	4.04	3.95	3.33	3.19	3.37	3.69	3.39
19	4.87	4.63	4.53	4.02	4.05	4.05	3.90	3.30	3.24	3.16	3.74	3.39
20	4.85	4.64	4.53	4.06	4.05	4.04	3.85	3.32	3.13	3.16	3.83	3.35
21	4.84	4.63	4.55	4.11	4.03	4.00	3.80	3.35	3.14	3.28	3.92	3.29
22	4.84	4.67	4.51	4.24	4.08	3.98	3.79	3.33	3.17	3.69	3.88	3.36
23	4.83	5.02	4.52	4.33	4.05	3.98	3.80	3.28	3.34	3.74	3.80	3.77
24	4.82	4.97	4.49	4.31	4.05	4.01	3.78	3.25	3.89	3.79	3.84	3.96
25	4.79	4.88	4.46	4.27	4.03	4.03	3.72	3.22	4.01	4.01	3.80	4.18
26	4.78	4.84	4.45	4.21	4.02	4.04	3.69	3.19	4.04	4.06	3.80	4.10
27	4.77	4.80	4.47	4.19	4.03	4.01	3.64	3.21	4.27	4.10	3.82	3.97
28	4.75	4.84	4.46	4.17	4.04	3.95	3.59	3.26	4.37	4.09	3.74	4.03
29	4.75	4.82	4.43	4.17	---	3.88	3.59	3.28	4.48	4.04	3.58	3.92
30	4.77	4.82	4.41	4.13	---	3.84	3.69	3.26	4.67	4.03	3.46	3.84
31	4.80	---	4.38	4.09	---	3.82	---	3.12	---	3.95	3.56	---
MEAN	5.06	4.75	4.57	4.18	4.27	4.13	4.14	3.78	3.40	4.45	3.57	3.60
MAX	5.48	5.02	4.75	4.37	5.06	4.49	5.02	4.77	4.67	5.89	3.92	4.18
MIN	4.75	4.63	4.38	4.02	3.98	3.82	3.59	3.12	3.04	3.16	3.20	3.27

CAL YR 1988 MEAN 4.77 MAX 7.34 MIN 3.25
WTR YR 1989 MEAN 4.16 MAX 5.89 MIN 3.04

02240000 OKLAWAHA RIVER NEAR CONNER, FL--Continued
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1966-77, 1982 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1972 to September 1973, October 1983 to current year.
WATER TEMPERATURE: January 1983 to current year.

INSTRUMENTATION.--Water-quality monitor since January 1983. Digital recorder set for 60-minute interval.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily mean, 444 microsiemens, Nov. 23, 1987; minimum daily mean, 227 microsiemens, Sept. 8, 1988.
WATER TEMPERATURE: Maximum daily mean, 27.5°C, Aug. 21-24, 1983; minimum daily mean, 11.0°C, Jan. 1, 1984.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily mean, 417 microsiemens, Mar. 5; minimum daily mean, 363 microsiemens, Oct. 9.
WATER TEMPERATURE: Maximum daily mean, 26.4°C, July 1; minimum daily mean, 20.8°C, Dec. 18, Feb. 11.

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	384	401	398	405	406	406	405	395	415	390	413	394
2	381	402	405	404	406	402	405	393	415	389	411	395
3	380	403	408	404	406	404	409	397	415	388	412	395
4	372	404	408	404	409	413	409	399	415	390	412	392
5	372	404	405	405	409	417	395	398	415	388	412	381
6	375	403	402	405	407	413	387	401	413	379	411	379
7	372	404	401	404	401	411	374	404	414	374	412	364
8	366	404	401	404	389	407	369	402	415	371	413	383
9	363	404	402	404	388	412	371	402	414	372	412	394
10	365	404	401	406	392	409	374	401	414	370	412	401
11	369	405	401	407	393	406	381	401	415	380	413	400
12	370	405	400	407	394	403	398	404	416	390	410	404
13	372	405	399	408	397	406	400	411	416	388	406	408
14	373	404	399	408	404	401	403	410	415	396	405	405
15	380	404	400	409	407	403	400	410	415	402	404	404
16	384	404	401	409	407	404	400	411	415	405	407	407
17	386	404	401	409	408	404	405	412	415	409	413	405
18	395	404	400	408	408	402	416	413	412	412	411	402
19	401	404	402	409	408	403	416	413	412	416	405	408
20	401	404	403	410	407	404	410	413	414	416	401	407
21	401	404	402	409	408	402	407	415	413	412	396	406
22	400	403	402	406	406	401	410	415	412	411	394	405
23	399	390	401	404	407	403	402	415	409	414	401	400
24	400	398	402	407	407	405	398	414	397	407	399	392
25	401	400	405	408	410	403	399	414	399	399	398	387
26	401	402	405	407	413	403	402	414	400	395	393	385
27	402	406	407	411	407	403	406	414	393	394	392	392
28	402	404	406	412	407	406	407	414	392	400	393	397
29	402	401	405	409	---	404	405	414	383	403	399	400
30	402	398	404	408	---	405	405	413	385	401	401	406
31	402	---	404	409	---	406	---	416	---	402	397	---
MEAN	386	403	403	407	404	406	399	408	409	396	405	397
MAX	402	406	408	412	413	417	416	416	416	416	413	408
MIN	363	390	398	404	388	401	369	393	383	370	392	364

WTR YR 1989 MEAN 402 MAX 417 MIN 353

02240000 OKLAWAHA RIVER NEAR CONNER, FL--Continued
(National stream-quality accounting network station)

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24.1	22.7	21.9	22.8	22.5	22.1	23.1	23.8	24.3	26.4	24.8	25.1
2	24.1	22.4	21.5	22.8	22.8	21.6	23.0	24.3	24.4	26.0	24.6	24.9
3	24.1	22.4	21.5	22.8	22.8	22.1	23.3	24.1	24.4	26.1	24.4	24.9
4	24.0	23.0	21.5	22.3	22.8	22.5	23.5	24.1	24.4	26.0	24.6	24.5
5	23.9	23.1	21.6	21.9	22.9	22.8	23.4	24.4	24.2	25.9	24.6	24.5
6	23.5	22.6	21.8	22.2	22.9	22.8	23.3	24.5	23.8	25.3	24.7	24.4
7	23.2	22.3	22.0	22.5	22.8	22.1	22.5	24.4	23.7	25.8	24.7	24.6
8	22.7	22.3	22.1	22.5	22.4	21.5	22.4	24.0	23.8	25.9	24.5	24.6
9	22.6	22.4	22.3	22.5	21.6	21.0	23.0	24.0	24.3	26.1	24.1	24.6
10	22.8	22.6	22.2	22.5	21.0	21.3	23.5	24.1	24.5	26.2	24.2	24.5
11	22.7	22.7	21.8	22.6	20.8	21.4	22.7	24.0	24.4	25.6	24.3	24.3
12	22.5	22.8	21.4	22.8	20.9	21.7	22.0	23.8	24.2	26.0	24.2	24.3
13	22.3	23.0	21.0	22.9	21.1	22.2	22.2	23.6	24.2	25.7	24.5	24.2
14	22.2	22.9	21.1	22.8	22.2	22.5	22.8	24.0	24.5	26.3	24.7	24.3
15	22.5	22.8	21.6	22.9	22.6	22.6	22.8	24.0	24.5	25.7	24.7	24.4
16	22.7	23.0	21.5	23.0	22.7	22.8	23.1	24.0	24.4	25.6	24.7	24.3
17	22.8	23.2	21.1	22.5	22.6	23.0	23.2	24.1	24.1	25.2	24.7	24.2
18	22.9	23.2	20.8	22.4	22.1	23.1	23.3	24.0	24.3	24.4	24.9	24.0
19	23.1	23.3	20.9	22.3	22.0	23.2	23.4	23.7	24.3	24.0	24.8	24.1
20	23.0	23.3	21.3	22.4	22.6	23.2	23.5	24.0	24.2	24.3	24.7	24.1
21	23.2	23.1	21.7	22.0	22.8	23.3	23.1	24.1	24.2	24.4	25.1	24.0
22	23.0	22.9	21.9	21.5	22.5	23.4	23.2	24.1	24.3	24.4	25.2	23.9
23	22.5	22.5	22.0	21.4	21.4	23.1	23.3	24.1	24.3	24.4	25.3	23.8
24	22.6	22.3	22.2	21.6	21.0	22.9	23.5	24.1	24.8	24.4	25.6	24.0
25	22.7	22.3	22.1	21.9	21.1	22.9	23.6	24.2	24.9	25.0	25.6	23.9
26	22.5	22.6	22.1	22.0	21.4	23.2	23.6	24.3	25.4	25.3	25.5	24.1
27	22.9	22.9	22.1	22.2	21.8	23.5	23.9	24.4	25.8	25.5	25.5	24.2
28	23.1	22.6	22.5	22.2	22.0	23.5	23.9	24.6	26.1	25.7	25.2	24.4
29	23.0	21.7	22.6	22.3	---	23.6	23.8	24.5	26.0	25.8	25.0	24.4
30	22.9	22.1	22.5	22.6	---	23.6	23.8	24.3	26.3	25.8	25.0	24.4
31	23.0	---	22.6	22.7	---	23.8	---	24.2	---	25.4	25.2	---
MEAN	23.0	22.7	21.8	22.4	22.1	22.7	23.2	24.1	24.6	25.4	24.8	24.3
MAX	24.1	23.3	22.6	23.0	22.9	23.8	23.9	24.6	26.3	26.4	25.6	25.1
MIN	22.2	21.7	20.8	21.4	20.8	21.0	22.0	23.6	23.7	24.0	24.1	23.8

WTR YR 1989 MEAN 23.4 MAX 26.4 MIN 20.8

02240000 OKLAWAHA RIVER NEAR CONNER, FL--Continued
(National stream-quality accounting network station)

WATER-QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	GAGE HEIGHT (FEET) (00065)	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	OXYGEN, DIS-SOLVED (MG/L) (00300)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)
DEC										
07...	1226	4.60	952	420	7.8	22.0	--	39	66	200
MAR										
15...	1600	4.11	850	419	7.8	23.5	8.4	470	E33	210
APR										
12...	0807	4.86	1020	417	7.8	21.5	4.2	E50	58	190
JUN										
05...	1100	3.14	715	431	8.0	24.0	4.0	62	E28	210
JUL										
13...	1255	5.04	1080	398	7.9	27.5	6.8	240	90	180
SEP										
07...	0848	3.87	818	376	7.5	24.5	3.0	E200	90	180

DATE	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)
DEC										
07...	65	9.7	6.8	0.90	149	49	10	0.20	9.6	257
MAR										
15...	66	10	7.0	1.3	161	51	11	0.20	9.2	256
APR										
12...	59	10	8.3	2.4	146	44	14	0.20	8.6	259
JUN										
05...	69	9.7	6.9	1.0	175	49	9.4	0.20	9.0	252
JUL										
13...	54	10	9.8	3.4	163	37	17	0.20	9.0	246
SEP										
07...	59	8.5	6.3	2.6	123	43	10	0.20	9.6	228

DATE	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS-PHOROUS TOTAL (MG/L AS P) (00665)	PHOS-PHOROUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHOROUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)	SEDI-MENT, SUS-PENDED (MG/L) (80154)
DEC										
07...	<0.010	0.850	0.010	<0.010	0.30	0.040	0.040	0.040	100	3
MAR										
15...	0.010	0.720	0.040	0.040	0.30	0.040	0.030	0.040	50	2
APR										
12...	<0.010	0.630	0.040	0.040	0.70	0.050	<0.010	<0.010	80	5
JUN										
05...	<0.010	0.820	0.050	0.010	0.60	0.030	0.030	0.030	--	--
JUL										
13...	<0.010	0.470	0.050	0.030	0.80	0.010	<0.010	<0.010	--	--
SEP										
07...	0.010	0.620	0.060	0.050	0.60	0.060	0.040	0.030	--	--

02240000 OKLAWAHA RIVER NEAR CONNER, FL--Continued
(National stream-quality accounting network station)

WATER-QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	ALUMINUM, DISSOLVED (UG/L AS AL) (01106)	ARSENIC DISSOLVED (UG/L AS AS) (01000)	BARIUM, DISSOLVED (UG/L AS BA) (01005)	BERYLLIUM, DISSOLVED (UG/L AS BE) (01010)	CADMIUM DISSOLVED (UG/L AS CD) (01025)	CHROMIUM, DISSOLVED (UG/L AS CR) (01030)	COBALT, DISSOLVED (UG/L AS CO) (01035)	COPPER, DISSOLVED (UG/L AS CU) (01040)	LEAD, DISSOLVED (UG/L AS PB) (01049)	LITHIUM DISSOLVED (UG/L AS LI) (01130)
MAR 15...	20	1	8	<0.5	<1	1	<3	<1	<5	8
JUN 05...	<10	<1	5	<0.5	<1	1	<3	1	3	6
JUL 13...	<10	1	4	<0.5	<1	<1	<3	1	<1	<4
SEP 07...	50	<1	6	<0.5	<1	2	<3	5	4	5

DATE	MANGANESE, DISSOLVED (UG/L AS MN) (01056)	MERCURY DISSOLVED (UG/L AS HG) (71890)	MOLYBDENUM, DISSOLVED (UG/L AS MO) (01060)	NICKEL, DISSOLVED (UG/L AS NI) (01065)	SELENIUM, DISSOLVED (UG/L AS SE) (01145)	SILVER, DISSOLVED (UG/L AS AG) (01075)	STRONTIUM, DISSOLVED (UG/L AS SR) (01080)	VANADIUM, DISSOLVED (UG/L AS V) (01085)	ZINC, DISSOLVED (UG/L AS ZN) (01090)
MAR 15...	3	0.3	<10	7	<1	1.0	550	<6	8
JUN 05...	1	0.4	<10	1	<1	<1.0	590	<6	19
JUL 13...	2	<0.1	<10	2	<1	<1.0	410	<6	17
SEP 07...	4	<0.1	10	1	<1	<1.0	510	<6	12

ST. JOHNS RIVER

OKLAWAHA RIVER BASIN

02240500 OKLAWAHA RIVER AT EUREKA, FL

LOCATION.--Lat 29°22'18", long 81°54'07", in SW¼ sec.9, T.13 S., R.24 E., Marion County, Hydrologic Unit 03080102, near right bank on upstream end of pier of bridge on county road 316 in Eureka, 3.1 mi downstream from Eaton Creek, and 33.1 mi upstream from mouth.

DRAINAGE AREA.--1,367 mi^2.

PERIOD OF RECORD.--February 1930 to June 1934, September 1943 to December 1952, January 1981 to current year.

REVISED RECORDS.--WDR FL-81-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (U.S. Army Corps of Engineers bench mark). Feb. 13, 1930, to June 30, 1934, nonrecording gage, and Sept. 16, 1943, to Dec. 31, 1952, water-stage recorder near present site at datum 15.44 ft higher.

REMARKS.--Estimated daily discharges: Apr. 9 to June 8. Records good except for estimated daily discharges, which are fair.

AVERAGE DISCHARGE.--21 years (water years 1931-34, 1944-52, 1982-89), 1,330 ft^3/s, 13.22 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,230 ft^3/s, Sept. 7, 1933; maximum gage height, 26.52 ft, Apr. 11, 1982; minimum discharge, 626 ft^3/s, Feb. 2, 1933, gage height, 18.08 ft, present datum.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,460 ft^3/s, Oct. 1, July 12,13; maximum gage height, 21.57 ft, Oct. 1, stage falling, peak gage height occurred Sept. 10, 1988; minimum discharge, 724 ft^3/s, June 10,11; minimum gage height, 18.89 ft, Apr. 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1440	1220	1100	922	927	890	813	890	760	1000	871	835
2	1400	1220	1100	919	919	956	807	950	760	1030	868	848
3	1390	1210	1080	916	911	994	806	1040	750	1040	905	838
4	1420	1200	1080	910	909	1010	800	1100	750	1050	829	831
5	1430	1200	1070	899	906	1020	832	1070	740	1060	793	847
6	1420	1200	1060	895	908	1010	877	1020	740	1100	777	888
7	1400	1180	1050	891	907	1000	912	1010	730	1150	767	935
8	1380	1170	1040	887	927	989	946	1000	730	1160	760	981
9	1350	1160	1020	888	974	973	1020	1010	731	1220	778	977
10	1320	1150	1000	891	1020	955	1100	1020	727	1300	807	930
11	1300	1140	1000	889	1060	936	1120	1030	731	1390	879	865
12	1280	1140	1030	883	1100	923	1130	1030	739	1450	839	816
13	1270	1140	1020	882	1130	918	1110	1010	741	1450	957	783
14	1250	1140	1000	877	1150	914	1080	990	743	1380	987	767
15	1240	1140	995	872	1150	908	1030	940	750	1290	946	759
16	1240	1150	988	876	1100	899	990	900	763	1220	901	754
17	1230	1150	980	874	1020	890	950	870	762	1110	875	764
18	1220	1150	965	867	961	881	920	850	769	976	867	820
19	1210	1150	956	863	932	873	900	830	792	866	874	871
20	1190	1130	949	862	916	869	880	820	816	825	894	843
21	1180	1120	945	899	916	864	860	810	800	808	935	808
22	1180	1120	942	992	956	859	860	800	795	963	945	801
23	1170	1220	940	1050	940	868	850	790	820	1130	924	938
24	1160	1210	938	1030	910	881	850	790	922	1220	894	1070
25	1160	1180	933	1000	895	871	840	790	949	1170	873	1280
26	1160	1150	929	985	887	870	840	780	946	1090	870	1380
27	1160	1120	923	970	881	867	830	780	936	1010	864	1390
28	1170	1100	923	956	877	860	830	770	936	951	861	1290
29	1170	1080	924	946	---	848	830	780	955	915	848	1170
30	1180	1090	924	940	---	836	850	770	971	888	821	1060
31	1200	---	923	933	---	824	---	770	---	872	812	---
TOTAL	39270	34730	30727	28464	27089	28256	27463	28010	24054	34084	26821	28139
MEAN	1267	1158	991	918	967	911	915	904	802	1099	865	938
MAX	1440	1220	1100	1050	1150	1020	1130	1100	971	1450	987	1390
MIN	1160	1080	923	862	877	824	800	770	727	808	760	754
AC-FT	77890	68890	60950	56460	53730	56050	54470	55560	47710	67610	53200	55810
CFSM	.93	.85	.73	.67	.71	.67	.67	.66	.59	.80	.63	.69
IN.	1.07	.95	.84	.77	.74	.77	.75	.76	.65	.93	.73	.77

CAL YR 1988 TOTAL 455083 MEAN 1243 MAX 3670 MIN 745 AC-FT 902700 CFSM .91 IN. 12.38
WTR YR 1989 TOTAL 357107 MEAN 978 MAX 1450 MIN 727 AC-FT 708300 CFSM .72 IN. 9.72

ST. JOHNS RIVER

OKLAWAHA RIVER BASIN

02240902 PRAIRIE CREEK NEAR GAINESVILLE, FL

LOCATION.--Lat. 29°36'41", long 82°14'56", in NW¼ sec.19, T.10 S., R.21 E., Alachua County, Hydrologic Unit 03080102, on upstream side of bridge on State Highway 20, 50 ft downstream from control at outlet of Newnans Lake, 7 mi southeast of Gainesville, and 8.4 mi upstream from mouth (at Orange Lake).

DRAINAGE AREA.--114 mi^2.

PERIOD OF RECORD.--1947-48, 1956, 1965-67 (miscellaneous discharge measurements and gage heights only), August 1978 to current year.

REVISED RECORDS.--WDR FL-79-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 61.79 ft above National Geodetic Vertical Datum of 1929 (Florida Department of Transportation bench mark). Prior to Aug. 24, 1978, nonrecording gage at same site at datum 0.50 ft higher.

REMARKS.--Records good. Some regulation by stoplogs in control 50 ft upstream.

AVERAGE DISCHARGE.--11 years, 69.2 ft^3/s, 8.24 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge measured, 812 ft^3/s, Mar. 15, 1948; maximum gage height observed, 8.02 ft, present datum, Mar. 15, 1948; minimum discharge, 0.25 ft^3/s, Jan. 17, 1988; minimum gage height, 1.65 ft, present datum, Apr. 23, 1956, June 15, 1985.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 293 ft^3/s, Oct. 1, gage height, 6.44 ft, stage falling, peak occurred Sept. 11, 1988; maximum independent peak discharge, 61 ft^3/s, Nov. 23, gage height 3.86 ft; minimum, 7.7 ft^3/s, Apr. 14, gage height, 2.26 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	287	88	40	22	13	15	13	53	26	29	9.5	12
2	277	81	37	24	13	17	12	55	25	30	9.3	11
3	269	76	33	21	13	17	11	54	24	30	12	11
4	273	72	31	24	13	17	11	52	23	30	14	12
5	267	63	32	21	13	17	11	49	23	29	14	12
6	259	61	30	19	19	16	11	48	23	28	14	12
7	248	57	28	19	19	17	10	48	23	27	14	12
8	238	54	28	19	19	18	10	46	24	26	14	12
9	224	52	27	19	20	17	10	43	22	26	14	12
10	216	49	27	20	18	17	10	42	23	25	14	12
11	209	47	33	20	17	15	10	43	23	24	14	12
12	204	46	42	17	17	14	8.8	41	22	23	15	12
13	202	42	32	17	16	14	8.2	40	21	23	15	12
14	194	41	30	18	16	14	8.0	39	21	24	15	11
15	185	41	30	15	16	14	8.3	38	20	23	15	11
16	180	38	32	15	16	14	8.4	37	20	23	15	11
17	174	39	31	15	17	15	8.2	37	22	23	15	12
18	167	41	30	14	16	14	8.0	37	22	18	15	12
19	162	39	29	13	15	15	8.3	34	24	11	15	11
20	159	34	29	14	14	14	8.6	33	24	10	15	11
21	149	33	29	23	14	13	8.9	33	24	10	15	11
22	144	38	29	30	15	14	8.9	32	24	11	15	11
23	136	54	29	17	14	14	10	31	23	10	15	11
24	129	47	28	16	14	14	41	30	23	9.9	14	12
25	125	46	28	16	14	14	57	31	23	9.6	14	12
26	116	47	30	15	14	14	56	30	23	9.5	14	12
27	111	43	28	15	13	14	54	30	22	9.3	14	12
28	106	46	24	16	13	13	54	30	21	9.4	13	12
29	102	45	27	15	---	13	54	29	21	9.3	13	12
30	100	41	25	14	---	12	54	29	26	9.3	12	11
31	95	---	24	15	---	12	---	27	---	9.4	12	---
TOTAL	5707	1501	932	558	431	458	591.6	1201	685	588.7	428.8	349
MEAN	184	50.0	30.1	18.0	15.4	14.8	19.7	38.7	22.8	19.0	13.8	11.6
MAX	287	88	42	30	20	18	57	55	26	30	15	12
MIN	95	33	24	13	13	12	8.0	27	20	9.3	9.3	11
CFSM	1.61	.44	.26	.16	.14	.13	.17	.34	.20	.17	.12	.10
IN.	1.86	.49	.30	.18	.14	.15	.19	.39	.22	.19	.14	.11

CAL YR 1988 TOTAL 29807.80 MEAN 81.4 MAX 540 MIN .29 CFSM .71 IN. 9.73
WTR YR 1989 TOTAL 13431.1 MEAN 36.8 MAX 287 MIN 8.0 CFSM .32 IN. 4.38

02240902 PRAIRIE CREEK NEAR GAINESVILLE, FL--Continued

GAGE HEIGHT, IN FEET ABOVE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.40	4.33	3.39	2.89	2.53	2.59	2.50	3.73	3.00	3.09	2.35	2.48
2	6.33	4.20	3.31	2.94	2.53	2.67	2.47	3.75	2.95	3.12	2.34	2.45
3	6.28	4.12	3.21	2.84	2.51	2.67	2.45	3.73	2.92	3.11	2.46	2.43
4	6.30	4.04	3.16	2.95	2.51	2.70	2.44	3.70	2.89	3.10	2.55	2.50
5	6.26	3.85	3.18	2.85	2.53	2.68	2.43	3.63	2.88	3.08	2.55	2.50
6	6.21	3.79	3.13	2.76	2.76	2.66	2.42	3.59	2.88	3.05	2.55	2.49
7	6.12	3.73	3.07	2.78	2.76	2.68	2.39	3.59	2.89	3.05	2.54	2.49
8	6.06	3.66	3.06	2.76	2.77	2.73	2.39	3.56	2.91	3.02	2.55	2.48
9	5.95	3.60	3.03	2.76	2.79	2.69	2.37	3.48	2.86	3.00	2.57	2.47
10	5.89	3.54	3.04	2.81	2.72	2.67	2.37	3.45	2.88	2.98	2.57	2.47
11	5.82	3.49	3.20	2.79	2.68	2.61	2.37	3.48	2.88	2.95	2.58	2.47
12	5.77	3.47	3.46	2.70	2.67	2.58	2.31	3.42	2.85	2.91	2.60	2.46
13	5.75	3.39	3.18	2.68	2.65	2.57	2.28	3.41	2.81	2.92	2.60	2.46
14	5.67	3.36	3.13	2.72	2.65	2.56	2.27	3.37	2.80	2.93	2.60	2.45
15	5.58	3.36	3.13	2.61	2.65	2.56	2.28	3.34	2.77	2.92	2.61	2.45
16	5.52	3.28	3.17	2.60	2.64	2.58	2.29	3.33	2.77	2.90	2.61	2.45
17	5.46	3.31	3.17	2.60	2.69	2.59	2.28	3.30	2.87	2.90	2.61	2.47
18	5.39	3.37	3.14	2.55	2.63	2.57	2.27	3.30	2.87	2.69	2.61	2.50
19	5.33	3.31	3.10	2.53	2.60	2.59	2.29	3.24	2.94	2.40	2.61	2.45
20	5.29	3.17	3.09	2.54	2.57	2.56	2.30	3.21	2.94	2.37	2.61	2.44
21	5.19	3.17	3.09	2.91	2.57	2.53	2.32	3.19	2.93	2.37	2.61	2.45
22	5.13	3.30	3.11	3.11	2.62	2.55	2.32	3.17	2.92	2.39	2.60	2.45
23	5.05	3.70	3.11	2.68	2.57	2.55	2.37	3.13	2.91	2.38	2.59	2.47
24	4.96	3.54	3.07	2.64	2.57	2.55	3.34	3.12	2.91	2.36	2.59	2.48
25	4.92	3.52	3.08	2.65	2.56	2.55	3.83	3.13	2.89	2.35	2.58	2.48
26	4.80	3.53	3.12	2.61	2.54	2.55	3.79	3.12	2.88	2.35	2.57	2.47
27	4.71	3.45	3.07	2.60	2.53	2.54	3.75	3.10	2.85	2.34	2.56	2.48
28	4.65	3.52	2.95	2.63	2.52	2.53	3.74	3.11	2.80	2.34	2.55	2.48
29	4.58	3.50	3.05	2.62	---	2.51	3.75	3.08	2.81	2.34	2.52	2.47
30	4.54	3.41	2.98	2.56	---	2.49	3.74	3.07	3.00	2.34	2.50	2.47
31	4.46	---	2.96	2.58	---	2.47	---	3.04	---	2.34	2.49	---
MEAN	5.50	3.57	3.13	2.72	2.62	2.59	2.67	3.35	2.88	2.72	2.56	2.47
MAX	6.40	4.33	3.46	3.11	2.79	2.73	3.83	3.75	3.00	3.12	2.61	2.50
MIN	4.46	3.17	2.95	2.53	2.51	2.47	2.27	3.04	2.77	2.34	2.34	2.43

CAL YR 1988 MEAN 3.54 MAX 7.66 MIN 1.81
WTR YR 1989 MEAN 3.07 MAX 6.40 MIN 2.27

ST. JOHNS RIVER

OKLAWAHA RIVER BASIN

02240954 HOGTOWN CREEK NEAR ARREDONDO, FL

LOCATION.--Lat 29°38'17", long 82°23'33", in NE¼ sec.10, T.10 S., R.19 E., Alachua County, Hydrologic Unit 03080102, near right bank at downstream side of bridge on county road 30, 2.5 mi northeast of Arredondo, and 4.2 mi west of Gainesville.

DRAINAGE AREA.--41.2 mi^2.

PERIOD OF RECORD.--December 1971 to current year.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Oct. 1-18, figures represent discharge of Haile Sink. Records fair except for estimated daily discharges, which are poor. Flow affected at times by backwater from Haile Sink.

AVERAGE DISCHARGE.--17 years (water years 1973-89), 19.8 ft^3/s, 6.53 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,040 ft^3/s, Sept. 7, 1988, gage height, 60.53 ft; minimum 0.15 ft^3/s, July 8,9,10, 1988; minimum gage height, 55.95 ft, June 14,15, July 28, 1977, May 23,24, 1981.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 71 ft^3/s, Nov. 23; maximum gage height, 58.58 ft, Oct. 1; minimum discharge 1.1 ft^3/s, June 3,4,5; minimum gage height, 56.00 ft, June 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	8.1	15	8.3	6.4	7.7	3.9	5.3	1.3	22	4.9	55
2	15	8.0	13	8.1	6.5	26	3.6	6.8	1.2	17	5.8	49
3	15	7.7	11	7.9	6.3	24	3.6	4.1	1.2	12	10	29
4	14	11	10	7.6	6.2	18	3.5	3.0	1.2	18	7.0	24
5	14	15	9.6	7.2	6.1	14	5.3	2.5	1.2	15	4.6	19
6	14	23	9.0	7.2	6.0	10	6.2	2.3	2.4	18	3.7	20
7	13	17	8.7	7.1	6.0	8.6	4.0	3.7	11	14	3.1	53
8	13	13	8.5	7.0	6.0	7.6	3.5	2.3	10	8.0	3.0	36
9	13	10	8.3	6.9	5.7	7.3	3.3	2.0	14	5.7	11	20
10	12	9.2	8.1	6.8	5.5	7.2	3.2	2.1	7.1	4.5	41	12
11	12	8.7	9.7	6.8	5.6	6.7	3.3	3.9	3.8	3.7	22	8.4
12	12	8.3	27	6.8	5.6	6.5	3.9	2.7	2.7	3.1	20	7.0
13	12	8.3	22	6.8	5.6	6.3	3.5	2.1	9.4	4.2	16	5.5
14	11	8.3	17	6.8	5.6	6.2	3.5	2.0	7.8	14	15	5.0
15	11	8.2	14	6.7	5.5	5.9	9.2	1.8	3.6	13	33	7.1
16	10	7.9	13	6.5	5.5	5.6	15	1.6	4.2	11	23	11
17	10	7.9	16	6.1	5.4	5.4	9.0	1.6	18	9.1	13	18
18	9.8	7.7	15	6.0	5.5	5.3	5.1	1.5	20	7.2	8.6	24
19	9.6	7.4	13	5.9	5.6	5.1	4.0	1.4	40	9.6	6.5	16
20	9.6	7.3	11	6.0	5.8	4.9	3.7	1.4	26	17	6.0	9.3
21	9.5	7.2	10	8.1	5.9	4.8	8.7	1.9	17	11	9.1	6.5
22	9.1	8.7	9.9	17	12	4.8	8.4	6.9	22	29	8.3	6.6
23	8.7	49	9.4	18	15	6.0	5.0	4.6	28	61	7.6	19
24	8.5	46	9.2	12	9.0	8.8	3.8	2.9	24	43	5.1	23
25	8.2	27	9.1	9.0	7.1	6.9	3.3	3.1	19	26	4.9	20
26	7.9	18	8.8	7.9	6.7	5.7	3.0	2.3	11	16	24	17
27	8.0	14	8.5	7.4	6.6	5.1	2.7	1.8	7.5	12	24	13
28	8.0	20	8.5	7.1	6.4	4.6	2.5	1.5	5.5	8.8	13	11
29	7.8	29	8.4	6.9	---	4.2	2.4	1.4	7.2	7.1	7.9	11
30	7.9	20	8.4	6.7	---	4.3	2.4	1.4	21	5.8	5.6	11
31	8.1	---	8.3	6.6	---	5.4	---	1.3	---	5.1	11	---
TOTAL	336.7	440.9	357.4	245.2	185.1	248.9	142.5	83.2	348.3	450.9	377.7	566.4
MEAN	10.9	14.7	11.5	7.91	6.61	8.03	4.75	2.68	11.6	14.5	12.2	18.9
MAX	15	49	27	18	15	26	15	6.9	40	61	41	55
MIN	7.8	7.2	8.1	5.9	5.4	4.2	2.4	1.3	1.2	3.1	3.0	5.0
AC-FT	668	875	709	486	367	494	283	165	691	894	749	1120
CFSM	.26	.36	.28	.19	.16	.19	.12	.07	.28	.35	.30	.46
IN.	.30	.40	.32	.22	.17	.22	.13	.08	.31	.41	.34	.51

CAL YR 1988 TOTAL 10439.06 MEAN 28.5 MAX 860 MIN .19 AC-FT 20710 CFSM .68 IN. 9.43
WTR YR 1989 TOTAL 3783.2 MEAN 10.4 MAX 61 MIN 1.2 AC-FT 7500 CFSM .25 IN. 3.42

OKLAWAHA RIVER BASIN

02240956 HAILE SINK NEAR ARREDONDO, FL

LOCATION.--Lat 29°37'41", long 82°24'40", in NE¼ sec.16, T.10 S., R.19 E., Alachua County, Hydrologic Unit 03080102, on northwest rim of sink, 1.6 mi north of Arredondo, and 5.2 mi west of Gainesville.

DRAINAGE AREA.--Indeterminate.

PERIOD OF RECORD.--December 1971 to September 1977 and February 1978 to current year (gage heights only).

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.

REMARKS.--Sink has no surface outlet.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 60.15 ft, Sept. 10,11, 1988; minimum, unknown, water level below lowest recordable gage height for many days in most years.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 58.61 ft, Oct. 1; minimum, 44.32 ft, Sept. 22.

GAGE HEIGHT, IN FEET ABOVE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	58.56	---	---	50.46	49.24	48.24	47.49	46.64	45.55	46.17	44.73	46.32
2	58.43	---	---	50.43	49.20	48.86	47.39	46.75	45.52	46.03	44.74	46.97
3	58.35	---	---	50.41	49.17	49.54	47.34	46.64	45.48	45.72	44.83	46.57
4	58.31	---	---	50.33	49.14	49.35	47.30	46.52	45.45	45.77	44.80	46.05
5	58.19	---	---	50.19	49.10	49.10	47.30	46.46	45.41	45.86	44.64	45.72
6	58.06	---	---	50.09	49.06	48.87	47.38	46.40	45.42	45.68	44.56	45.50
7	57.93	---	---	50.04	49.02	48.61	47.24	46.41	45.68	45.80	44.50	46.30
8	57.78	---	---	50.00	48.98	48.35	47.16	46.34	45.77	45.41	44.45	46.88
9	57.64	---	51.61	49.97	48.89	48.18	47.11	46.27	45.80	45.21	44.74	46.17
10	57.52	---	51.50	49.93	48.79	48.09	47.08	46.23	45.70	45.10	45.88	45.44
11	57.37	---	51.46	49.89	48.71	48.04	47.04	46.24	45.47	45.03	45.90	44.99
12	57.21	---	51.58	49.86	48.65	48.00	47.01	46.18	45.38	44.97	45.58	44.75
13	57.05	---	51.81	49.84	48.61	47.98	46.96	46.09	45.48	44.95	45.38	44.57
14	56.90	---	51.77	49.81	48.58	47.96	46.93	46.05	45.62	45.19	45.24	44.44
15	56.79	---	51.63	49.80	48.57	47.96	47.11	46.01	45.38	45.41	45.99	44.44
16	56.65	---	51.51	49.77	48.56	47.94	47.46	45.97	45.30	45.23	46.05	44.63
17	56.51	---	51.44	49.70	48.55	47.91	47.45	45.93	45.60	45.15	45.45	44.94
18	56.37	---	51.40	49.62	48.52	47.89	47.15	45.89	46.05	45.01	45.01	45.50
19	56.26	---	51.26	49.54	48.46	47.87	47.01	45.85	46.66	45.04	44.77	45.33
20	56.13	---	51.10	49.50	48.43	47.84	46.95	45.82	46.64	45.27	44.65	44.83
21	---	---	51.00	49.52	48.44	47.82	47.04	45.81	46.29	45.24	44.69	44.49
22	---	---	50.93	49.76	48.62	47.78	47.16	45.98	45.98	45.30	44.71	44.40
23	---	---	50.89	50.04	48.85	47.78	46.94	46.02	46.55	46.80	44.66	44.85
24	---	---	50.85	49.88	48.54	47.89	46.82	45.90	46.57	47.22	44.53	45.37
25	---	---	50.80	49.63	48.31	47.80	46.75	45.86	46.35	46.69	44.45	45.36
26	---	---	50.73	49.49	48.24	47.69	46.71	45.80	45.96	46.00	44.78	45.27
27	---	---	50.65	49.44	48.22	47.62	46.67	45.75	45.62	45.51	45.57	45.07
28	---	---	50.59	49.38	48.20	47.58	46.63	45.70	45.43	45.22	45.14	44.92
29	---	---	50.55	49.34	---	47.56	46.59	45.65	45.35	45.02	44.74	44.90
30	---	---	50.53	49.31	---	47.55	46.56	45.62	45.70	44.88	44.51	44.87
31	---	---	50.51	49.28	---	47.58	---	45.58	---	44.79	44.67	---
MEAN	---	---	---	49.81	48.70	48.10	47.06	46.08	45.77	45.51	44.98	45.33
MAX	---	---	---	50.46	49.24	49.54	47.49	46.75	46.66	47.22	46.05	46.97
MIN	---	---	---	49.28	48.20	47.55	46.56	45.58	45.30	44.79	44.45	44.40

ST. JOHNS RIVER

OKLAWAHA RIVER BASIN

02241000 CAMPS CANAL NEAR ROCHELLE, FL

LOCATION.--Lat 29°34'33", long 82°15'00", in SW¼ sec.31, Moses Levy Land Grant, Alachua County, Hydrologic Unit 03080102, near left bank on downstream side of bridge on county road 234, 2.2 mi southwest of Rochelle, and 5.0 mi upstream from Orange Lake.

DRAINAGE AREA.--775 mi^2, includes Paynes Prairie, a diked sinkhole area of 650 mi^2, approximately, which is noncontributing except by pumpage.

PERIOD OF RECORD.--March 1948 to November 1952 (discharge measurements only), August 1957 to September 1960, March 1978 to current year.

GAGE.--Water-stage recorder. Datum of gage is 53.44 ft above National Geodetic Vertical Datum of 1929. Mar. 16, 1948 to Nov. 14, 1952, reference point at datum 15.27 ft higher. Aug. 8, 1957, to Oct. 28, 1960, water-stage recorder at datum 5.00 ft higher.

REMARKS.--Estimated daily discharges: Oct. 1 to Nov. 9. Records fair. Seasonal diversion out of or into canal above station by drainage and/or pumpage for irrigation of pastures in Paynes Prairie.

AVERAGE DISCHARGE.--14 years (water years 1958-60, 1979-89), 60.0 ft^3/s, 1.40 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,040 ft^3/s, Mar. 24, 1959, gage height, 13.21 ft, present datum; no flow June 8-13, July 11, 12, 1985; minimum gage height, 6.15 ft, June 12, 1985.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 132 ft^3/s, Oct. 1, occurred on recession following peak of Sept. 12, 1988; maximum independent peak discharge, 35 ft^3/s, all or part of each day Apr. 30, May 1-5, gage height, 7.76 ft; minimum discharge, 6.1 ft^3/s, Aug. 2, gage height, 6.97 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	128	43	22	18	9.1	12	11	35	23	24	6.3	9.2
2	125	39	21	18	8.9	17	11	35	22	25	6.6	8.4
3	121	36	20	17	8.9	17	11	35	21	24	7.7	7.9
4	116	35	19	17	8.7	16	11	35	20	23	8.5	8.1
5	114	33	19	16	8.7	16	11	35	20	23	8.8	8.5
6	110	31	19	15	11	15	11	34	21	23	8.7	8.5
7	107	29	18	14	14	15	10	34	21	22	8.6	8.5
8	99	27	17	14	14	16	9.7	34	22	22	8.7	8.6
9	94	26	17	14	14	16	9.7	33	21	21	8.9	8.4
10	91	24	17	14	14	15	9.5	32	20	20	9.1	8.3
11	87	23	19	14	13	14	9.5	33	20	20	9.0	8.3
12	83	22	23	14	12	13	9.0	30	20	19	9.8	8.4
13	81	22	22	12	12	13	8.5	30	19	18	9.8	8.4
14	77	22	19	13	12	13	8.4	32	18	19	9.9	8.3
15	76	21	20	12	12	13	9.3	31	18	19	9.8	8.3
16	75	21	20	10	12	13	8.8	31	19	19	9.6	8.9
17	71	21	20	10	12	13	8.6	30	20	19	9.6	9.2
18	70	21	20	9.4	13	13	8.3	30	20	19	9.6	11
19	68	22	19	9.0	12	13	8.2	29	22	10	9.9	9.6
20	65	20	19	9.2	11	13	8.2	28	22	8.2	10	8.8
21	63	19	19	13	11	12	8.4	29	21	8.1	9.7	8.6
22	61	20	19	20	13	12	8.4	28	20	11	9.3	9.2
23	59	29	20	15	12	15	8.2	26	21	11	9.1	10
24	56	25	20	13	11	14	15	26	21	8.3	8.9	10
25	55	24	19	12	11	14	32	26	20	7.6	8.9	11
26	52	24	20	11	11	13	34	25	19	7.2	8.9	11
27	50	24	20	11	11	13	34	25	18	7.0	8.9	10
28	48	24	19	11	10	13	33	24	17	6.8	8.8	11
29	46	24	19	11	---	12	34	25	17	6.6	8.7	11
30	45	23	19	10	---	12	35	24	22	6.4	8.3	10
31	48	---	18	9.5	---	11	---	23	---	6.4	8.5	---
TOTAL	2441	774	602	406.1	322.3	427	433.7	927	605	483.6	276.9	275.4
MEAN	78.7	25.8	19.4	13.1	11.5	13.8	14.5	29.9	20.2	15.6	8.93	9.18
MAX	128	43	23	20	14	17	35	35	23	25	10	11
MIN	45	19	17	9.0	8.7	11	8.2	23	17	6.4	6.3	7.9
CFSM	.10	.03	.03	.02	.01	.02	.02	.04	.03	.02	.01	.01
IN.	.12	.04	.03	.02	.02	.02	.02	.04	.03	.02	.01	.01

CAL YR 1988 TOTAL 14980.39 MEAN 40.9 MAX 378 MIN .39 CFSM .05 IN. .72
WTR YR 1989 TOTAL 7974.0 MEAN 21.8 MAX 128 MIN 6.3 CFSM .03 IN. .38

02241000 CAMPS CANAL NEAR ROCHELLE, FL--Continued

GAGE HEIGHT, IN FEET ABOVE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.29	8.21	7.80	7.62	7.31	7.33	7.24	7.75	7.54	7.60	6.99	7.21
2	9.26	8.15	7.77	7.61	7.28	7.44	7.23	7.76	7.52	7.60	7.01	7.15
3	9.22	8.11	7.74	7.60	7.28	7.45	7.22	7.76	7.50	7.59	7.09	7.12
4	9.18	8.09	7.71	7.58	7.27	7.44	7.21	7.76	7.48	7.58	7.15	7.13
5	9.15	8.05	7.71	7.57	7.28	7.43	7.23	7.75	7.47	7.57	7.17	7.16
6	9.11	8.02	7.70	7.53	7.35	7.41	7.22	7.74	7.50	7.56	7.17	7.16
7	9.07	7.99	7.68	7.51	7.42	7.40	7.19	7.74	7.51	7.55	7.16	7.16
8	9.00	7.95	7.66	7.50	7.43	7.41	7.18	7.74	7.52	7.53	7.16	7.17
9	8.95	7.93	7.65	7.49	7.44	7.41	7.18	7.72	7.50	7.52	7.18	7.15
10	8.90	7.88	7.65	7.50	7.42	7.39	7.17	7.71	7.47	7.50	7.20	7.15
11	8.86	7.86	7.88	7.50	7.39	7.36	7.17	7.71	7.47	7.48	7.19	7.15
12	8.81	7.85	7.78	7.48	7.37	7.33	7.15	7.68	7.47	7.45	7.22	7.15
13	8.77	7.84	7.76	7.44	7.36	7.32	7.11	7.68	7.45	7.44	7.22	7.15
14	8.73	7.82	7.70	7.45	7.36	7.31	7.10	7.71	7.43	7.46	7.22	7.15
15	8.70	7.81	7.70	7.42	7.36	7.31	7.16	7.69	7.41	7.46	7.22	7.15
16	8.68	7.80	7.70	7.37	7.35	7.31	7.14	7.69	7.45	7.45	7.21	7.19
17	8.64	7.79	7.72	7.38	7.36	7.32	7.12	7.68	7.49	7.46	7.21	7.21
18	8.61	7.80	7.70	7.35	7.37	7.32	7.10	7.67	7.48	7.46	7.21	7.26
19	8.59	7.81	7.69	7.32	7.34	7.31	7.09	7.66	7.52	7.23	7.22	7.22
20	8.54	7.76	7.68	7.33	7.32	7.31	7.09	7.65	7.52	7.12	7.24	7.19
21	8.52	7.74	7.67	7.45	7.31	7.29	7.10	7.65	7.51	7.10	7.23	7.18
22	8.49	7.76	7.68	7.62	7.37	7.29	7.11	7.65	7.50	7.24	7.22	7.21
23	8.46	7.94	7.69	7.50	7.34	7.35	7.10	7.62	7.51	7.24	7.21	7.25
24	8.42	7.88	7.68	7.42	7.31	7.34	7.33	7.61	7.52	7.14	7.20	7.26
25	8.40	7.85	7.67	7.40	7.31	7.32	7.70	7.61	7.48	7.08	7.19	7.29
26	8.37	7.86	7.68	7.39	7.30	7.31	7.73	7.61	7.46	7.05	7.20	7.26
27	8.33	7.84	7.68	7.37	7.30	7.30	7.74	7.59	7.44	7.03	7.19	7.25
28	8.30	7.86	7.65	7.36	7.28	7.28	7.72	7.58	7.42	7.02	7.18	7.27
29	8.27	7.84	7.66	7.37	---	7.27	7.74	7.59	7.41	7.01	7.17	7.27
30	8.26	7.82	7.65	7.34	---	7.26	7.75	7.58	7.53	6.99	7.15	7.25
31	8.29	---	7.64	7.32	---	7.24	---	7.56	---	6.99	7.15	---
MEAN	8.72	7.90	7.69	7.45	7.34	7.34	7.28	7.67	7.48	7.34	7.18	7.20
MAX	9.29	8.21	7.80	7.62	7.44	7.45	7.75	7.76	7.54	7.60	7.24	7.29
MIN	8.26	7.74	7.64	7.32	7.26	7.24	7.09	7.56	7.41	6.99	6.99	7.12

CAL YR 1988 MEAN 7.84 MAX 10.82 MIN 6.68
WTR YR 1989 MEAN 7.55 MAX 9.29 MIN 6.99

OKLAWAHA RIVER BASIN

02242451 ORANGE LAKE OUTLET NEAR CITRA, FL

LOCATION.--Lat 29°26'30", long 82°06'33", in SE¼ sec.16, T.12 S., R.22 E., Alachua County, Hydrologic Unit 03080102, near left bank on upstream side of northbound bridge on U.S. Highway 301, 0.8 mi south of Island Grove, and 1.8 mi north of Citra.

DRAINAGE AREA.--1,012 mi^2.

PERIOD OF RECORD.--1941, 1957, 1960 (miscellaneous discharge measurements only); January 1947 to September 1955; April 1982 to current year.

GAGE.--Water-stage recorder and concrete weir with notch. Datum of gage is 53.41 ft above National Geodetic Vertical Datum of 1929. Prior to September 1955, near present site at same datum.

REMARKS.--Estimated daily discharges: Mar. 12 to Apr. 4, Apr. 24-26, June 5. Records poor. Orange and Lochloosa Lakes are connected by Cross Creek through which there is a natural diversion from one lake to the other.

AVERAGE DISCHARGE.--16 years (water years 1947-55, corrected, 1983-89), 103 ft^3/s, 1.38 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,040 ft^3/s, Apr. 4, 1987; maximum gage height, 7.81 ft, Mar. 17, 1948; no flow for many days in some years; outlet dry at gage for many days in some years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 288 ft^3/s, Oct. 6, gage height, 5.09 ft; minimum daily discharge, 0.56 ft^3/s, Sept. 30; minimum gage height, 2.07 ft, Sept. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	187	135	92	53	30	22	15	11	2.8	1.0	1.0	.65
2	180	130	87	53	30	23	15	11	2.5	1.1	1.0	.67
3	180	108	84	55	29	24	14	11	2.1	1.0	1.1	.70
4	191	98	83	53	29	24	14	10	1.8	.95	1.3	1.2
5	172	105	79	46	29	24	14	9.7	2.0	.89	1.2	1.1
6	271	105	77	45	28	24	15	9.6	2.3	1.0	1.2	1.2
7	271	100	76	43	28	24	15	9.5	1.5	1.3	1.1	1.1
8	261	96	74	42	28	23	14	9.1	1.4	.99	1.0	1.0
9	254	93	73	42	28	23	13	8.6	1.3	.92	1.1	.95
10	246	90	71	40	27	23	13	8.3	1.2	.98	1.3	.89
11	233	88	71	40	26	22	13	8.4	1.1	.85	1.2	.85
12	227	85	75	40	26	21	13	8.0	1.1	.75	1.4	.81
13	219	84	77	39	25	21	12	7.7	1.0	.69	1.2	.78
14	210	81	71	37	25	20	12	7.3	.93	.67	1.0	.77
15	204	78	70	37	24	21	13	7.0	.86	.65	.97	.74
16	198	77	72	37	24	21	13	6.6	.82	.64	.92	.72
17	193	77	76	34	24	21	13	6.4	.80	.59	.87	.73
18	189	73	72	33	24	20	12	6.1	.80	.60	.83	.71
19	184	72	66	31	23	20	12	5.7	.94	.63	.90	.67
20	177	70	65	30	23	19	12	5.6	1.3	.66	1.3	.64
21	174	68	64	34	22	17	12	5.6	1.1	.92	1.1	.62
22	169	69	62	45	25	18	11	5.7	.99	2.2	.94	.73
23	161	98	61	45	27	17	11	5.5	.97	2.0	.82	.84
24	157	93	62	39	25	18	11	5.2	1.1	2.0	.75	.85
25	153	87	60	37	23	18	12	5.0	1.2	2.4	.73	.98
26	148	82	58	36	22	18	12	4.6	1.1	2.0	.71	.78
27	143	81	56	36	22	17	12	4.3	.99	1.7	.69	.66
28	141	98	57	34	22	17	12	4.0	.90	1.6	.65	.64
29	139	91	55	33	---	17	11	3.7	.87	1.4	.62	.61
30	137	91	55	33	---	15	11	3.4	.87	1.3	.58	.56
31	136	---	54	31	---	15	---	3.1	---	1.1	.58	---
TOTAL	5905	2703	2155	1233	718	627	382	216.7	38.64	35.48	30.06	24.15
MEAN	190	90.1	69.5	39.8	25.6	20.2	12.7	6.99	1.29	1.14	.97	.80
MAX	271	135	92	55	30	24	15	11	2.8	2.4	1.4	1.2
MIN	136	68	54	30	22	15	11	3.1	.80	.59	.58	.56
CFSM	.19	.09	.07	.04	.03	.02	.01	.01	.00	.00	.00	.00
IN.	.22	.10	.08	.05	.03	.02	.01	.01	.00	.00	.00	.00

CAL YR 1988 TOTAL 17829.56 MEAN 48.7 MAX 341 MIN .28 CFSM .05 IN. .66
WTR YR 1989 TOTAL 14068.03 MEAN 38.5 MAX 271 MIN .56 CFSM .04 IN. .52

ST. JOHNS RIVER

OKLAWAHA RIVER BASIN

02242500 LOCHLOOSA SLOUGH NEAR LOCHLOOSA, FL

LOCATION.--Lat 29°29'17", long 82°06'07", in SW¼ sec.34, T.11 S., R.22 E., Alachua County, Hydrologic Unit 03080102, near left bank at upstream side of culverts on U.S. Highway 301, 1.2 mi south of Lochloosa, and 2.4 mi north of Island Grove.

DRAINAGE AREA.--Indeterminate.

PERIOD OF RECORD.--January 1947 to September 1955; April 1982 to current year. Prior to April 1982, published as Lochloosa Lake Outlet near Lochloosa.

GAGE.--Water-stage recorder. Datum of gage is 53.41 ft above National Geodetic Vertical Datum of 1929. Prior to September 1955, near present site at datum 2.00 ft higher.

REMARKS.--Estimated daily discharges: Sept. 19-30. Records poor. Station does not represent the entire outflow of Lochloosa Lake as there is a natural diversion through Cross Creek into Orange Lake.

AVERAGE DISCHARGE.--16 years (water years 1947-55, corrected, 1983-89), 20.4 ft^3/s, 14,800 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 341 ft^3/s, Mar. 12,13, 1948, gage height, 6.04 ft, site and datum then in use; no flow for many days in most years; slough dry at times in 1955, 1985, 1986.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 22.0 ft^3/s, Oct. 1,3,4,5; maximum gage height, 6.49 ft, Oct. 3,4; no flow for many days; minimum gage height, 3.32 ft, July 19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22	7.2	6.2	2.6	1.0	.08	.00	.00	.00	.00	.00	.00
2	21	6.8	5.5	2.6	1.0	.42	.00	.00	.00	.00	.00	.00
3	21	6.3	4.9	2.6	.95	.67	.00	.00	.00	.00	.00	.00
4	22	6.1	4.6	2.6	.92	.78	.00	.00	.00	.00	.00	.00
5	22	7.1	4.4	2.4	.82	.77	.00	.00	.00	.00	.00	.00
6	21	7.7	4.1	2.2	.76	.71	.00	.00	.00	.00	.00	.00
7	20	7.1	3.9	2.2	.72	.69	.00	.00	.00	.00	.00	.00
8	19	6.4	3.9	2.0	.68	.61	.00	.00	.00	.00	.00	.00
9	18	5.9	3.8	2.0	.61	.51	.00	.00	.00	.00	.00	.00
10	18	5.4	3.8	1.9	.48	.42	.00	.00	.00	.00	.00	.00
11	18	5.1	3.9	1.8	.38	.33	.00	.00	.00	.00	.00	.00
12	18	4.7	4.2	1.8	.31	.27	.00	.00	.00	.00	.00	.00
13	17	4.4	4.2	1.7	.24	.21	.00	.00	.00	.00	.00	.00
14	16	4.3	3.9	1.7	.19	.14	.00	.00	.00	.00	.00	.00
15	15	4.0	3.8	1.5	.12	.07	.00	.00	.00	.00	.00	.00
16	15	3.8	4.1	1.5	.04	.00	.00	.00	.00	.00	.00	.00
17	15	3.8	4.2	1.4	.00	.00	.00	.00	.00	.00	.00	.00
18	14	3.8	3.9	1.3	.00	.00	.00	.00	.00	.00	.00	.00
19	14	3.7	3.7	1.2	.00	.00	.00	.00	.00	.00	.00	.00
20	14	3.6	3.5	1.2	.00	.00	.00	.00	.00	.00	.00	.00
21	13	3.6	3.5	1.4	.00	.00	.00	.00	.00	.00	.00	.00
22	13	3.9	3.4	1.7	.16	.00	.00	.00	.00	.00	.00	.00
23	12	6.6	3.4	1.7	.12	.00	.00	.00	.00	.00	.00	.00
24	11	6.1	3.3	1.6	.03	.00	.00	.00	.00	.00	.00	.00
25	11	5.4	3.2	1.5	.00	.00	.00	.00	.00	.00	.00	.00
26	9.9	5.1	3.0	1.4	.00	.00	.00	.00	.00	.00	.00	.00
27	9.3	5.0	2.9	1.4	.00	.00	.00	.00	.00	.00	.00	.00
28	8.8	8.2	2.9	1.3	.00	.00	.00	.00	.00	.00	.00	.00
29	8.4	7.5	2.9	1.2	---	.00	.00	.00	.00	.00	.00	.00
30	8.0	6.6	2.8	1.1	---	.00	.00	.00	.00	.00	.00	.00
31	7.6	---	2.8	1.1	---	.00	---	.00	---	.00	.00	---
TOTAL	472.0	165.2	118.6	53.6	9.53	6.68	0.00	0.00	0.00	0.00	0.00	0.00
MEAN	15.2	5.51	3.83	1.73	.34	.22	.00	.00	.00	.00	.00	.00
MAX	22	8.2	6.2	2.6	1.0	.78	.00	.00	.00	.00	.00	.00
MIN	7.6	3.6	2.8	1.1	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	936	328	235	106	19	13	.0	.0	.0	.0	.0	.0

CAL YR 1988 TOTAL 1301.99 MEAN 3.56 MAX 27 MIN .00 AC-FT 2580
WTR YR 1989 TOTAL 825.61 MEAN 2.26 MAX 22 MIN .00 AC-FT 1640

ST. JOHNS RIVER

OKLAWAHA RIVER BASIN

02243000 ORANGE CREEK AT ORANGE SPRINGS, FL

LOCATION.--Lat 29°30'34", long 81°56'47", in NE¼ sec.25, T.11 S., R.23 E., Marion County, Hydrologic Unit 03080102, near right bank at downstream side of bridge on State Highway 21, 0.2 mi northwest of Orange Springs, and 1.2 mi upstream from Little Orange Creek.

DRAINAGE AREA.--1,119 mi^2, includes Paynes prairie, a diked sinkhole area of 650 mi^2, approximately, which is noncontributing except by pumpage.

PERIOD OF RECORD.--November 1941 to June 1942 (discharge measurements only), July 1942 to December 1952, October 1955 to September 1971, October 1971 to April 1975 (discharge measurements only), May 1975 to current year.

REVISED RECORDS.--WDR FL-80-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 19.81 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 18, 1955, and Oct. 13, 1971, to May 6, 1975, nonrecording gage at same site and datum. Feb. 4, 1980, to May 7, 1981, temporary gage 125 ft downstream at same datum.

REMARKS.--Estimated daily discharges: Aug. 31 to Sept. 30. Records good except for estimated daily discharges, which are poor. Records include some flow diverted, during periods of high stages, from Santa Fe Lake in Suwannee River basin through Lochloosa Creek. Since April 1963, concrete dam at outlet of Orange Lake, 11 mi upstream from station.

AVERAGE DISCHARGE.--40 years (water years 1943-52, 1956-71, 1976-89), 156 ft^3/s, 1.99 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,170 ft^3/s, Sept. 13, 1964, gage height, 9.86 ft; minimum daily, 2.0 ft^3/s, May 31, June 1, 3-5, 9-14, 1956; minimum gage height, 0.73 ft, June 4,5, 1989.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in October 1941 reached a stage of 10.6 ft, from information by local resident, discharge, 2,400 ft^3/s, from rating curve extended above 1,500 ft^3/s.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 500 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Oct. 1	0200	*433	*6.42				

Minimum discharge, 3.1 ft^3/s, June 4,5, gage height, 0.73 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	422	144	135	69	41	33	21	8.9	3.5	11	9.4	57
2	395	137	130	68	41	64	20	8.4	3.4	14	9.2	41
3	371	130	126	66	40	64	19	8.0	3.3	10	8.6	45
4	365	125	124	64	39	62	19	7.5	3.5	8.7	7.3	34
5	326	134	122	68	41	60	27	7.0	3.2	7.1	8.1	31
6	298	141	114	62	40	54	32	7.1	3.7	6.4	7.2	30
7	277	140	109	57	40	49	32	6.1	4.4	7.4	5.7	35
8	262	138	105	59	38	45	26	5.6	4.5	6.5	5.2	24
9	251	132	103	55	36	42	23	5.4	4.7	5.5	5.2	19
10	251	130	98	52	34	40	20	5.1	4.2	6.4	7.8	16
11	250	124	103	50	33	43	20	5.8	4.1	5.7	18	14
12	249	119	109	48	36	41	20	6.9	4.3	4.8	47	12
13	242	119	111	48	33	37	19	6.5	4.4	4.4	21	11
14	240	116	109	50	35	34	19	6.4	4.0	4.4	15	10
15	231	110	110	47	32	32	28	4.9	3.7	5.3	13	9.4
16	223	105	104	45	31	31	32	4.8	3.6	7.2	11	17
17	218	101	110	43	30	30	26	4.7	3.6	5.8	9.9	12
18	213	102	106	41	29	29	27	4.4	3.9	5.1	8.7	9.2
19	204	97	107	40	29	27	22	4.2	5.3	4.8	7.3	8.2
20	197	97	99	42	29	26	20	4.1	8.6	5.9	7.6	7.8
21	195	90	93	43	33	25	19	4.1	7.2	8.7	7.4	7.4
22	189	97	94	55	53	26	18	4.4	6.9	49	7.0	18
23	183	175	87	67	49	41	16	4.2	11	44	6.6	31
24	179	163	83	68	42	38	15	4.1	27	38	6.0	22
25	172	158	85	60	38	32	14	4.1	14	40	7.5	26
26	170	148	81	55	35	35	12	3.9	11	28	7.9	19
27	162	137	76	51	33	32	11	3.7	9.1	21	11	17
28	157	138	77	49	32	27	10	3.5	8.1	17	11	17
29	150	136	73	46	---	25	9.5	3.7	12	14	8.1	16
30	145	137	70	45	---	23	9.2	3.9	10	12	7.4	13
31	141	---	72	43	---	22	---	3.7	---	10	6.9	---
TOTAL	7330	3820	3125	1656	1022	1169	605.7	165.1	200.2	418.1	319.0	629.0
MEAN	236	127	101	53.4	36.5	37.7	20.2	5.33	6.67	13.5	10.3	21.0
MAX	422	175	135	69	53	64	32	8.9	27	49	47	57
MIN	141	90	70	40	29	22	9.2	3.5	3.2	4.4	5.2	7.4
CFSM	.22	.12	.09	.05	.03	.04	.02	.00	.01	.01	.01	.02
IN.	.26	.13	.11	.06	.04	.04	.02	.01	.01	.01	.01	.02

CAL YR 1988 TOTAL 28047.7 MEAN 76.6 MAX 431 MIN 3.1 CFSM .07 IN. .98
WTR YR 1989 TOTAL 20459.1 MEAN 56.1 MAX 422 MIN 3.2 CFSM .05 IN. .71

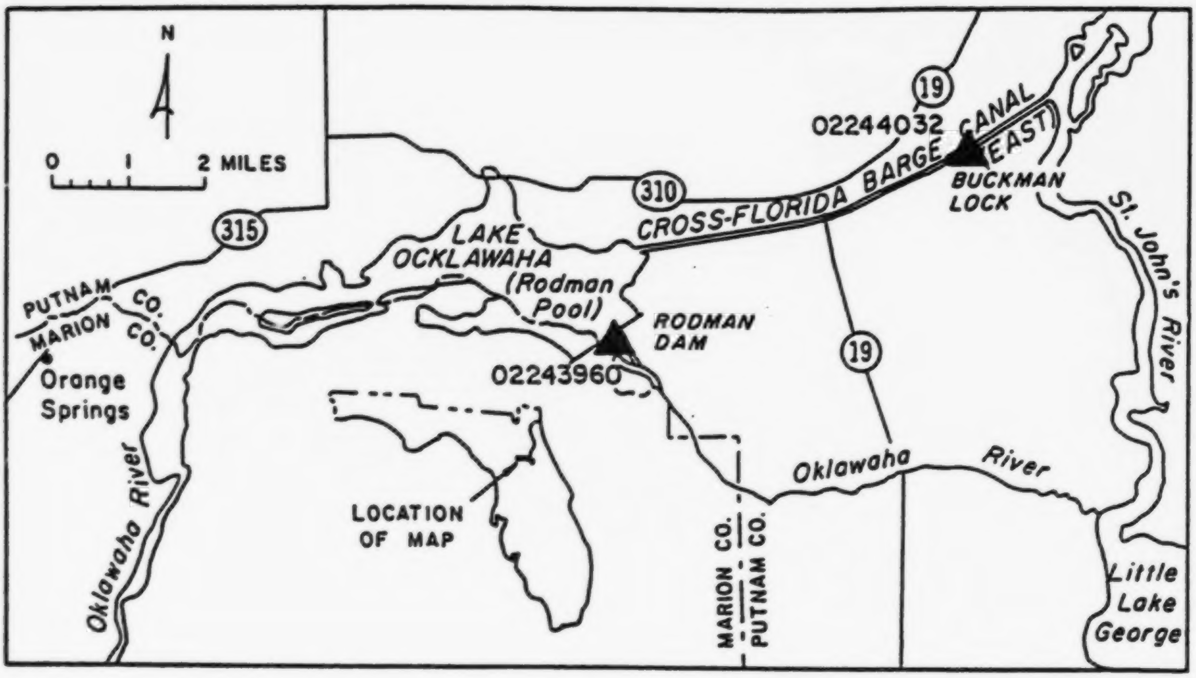

N
0
1
2 MILES
19
02244032
CANAL
(EAST)
CROSS-FLORIDA BARGE
BUCKMAN
LOCK
310
315
LAKE
OCKLAWAHA
(Rodman
Pool)
RODMAN
DAM
02243960
PUTNAM CO.
MARION CO.
Orange
Springs
19
St. John's River
Oklawaha River
Oklawaha River
LOCATION
OF MAP
MARION CO.
PUTNAM CO.
Little
Lake
George

Figure 17.--Location of stream gaging stations in the lower Oklawaha River basin.

ST. JOHNS RIVER

OKLAWAHA RIVER BASIN

02243960 OKLAWAHA RIVER AT RODMAN DAM, NEAR ORANGE SPRINGS, FL

LOCATION.--Lat 29°30'30", long 81°48'15", in NW¼ sec.28, T.11 S., R.25 E., Putnam County, Hydrologic Unit 03080102, at downstream side of control structure of Rodman Dam, 8.4 mi east of Orange Springs, and 11.6 mi upstream from mouth.

DRAINAGE AREA.--2,747 mi^2, includes Paynes Prairie, a diked sinkhole area of 650 mi^2, approximately, which is noncontributing except for pumpage.

PERIOD OF RECORD.--October 1968 to current year.

REVISED RECORDS.--WDR FL-77-1: Drainage area.

GAGE.--Dual water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (U.S. Army Corps of Engineers bench mark). Auxiliary gage at upstream side of control structure at same datum.

REMARKS.--Records fair. Flow regulated by manipulation of gates in spillway; dam completed and flow through spillway began on Sept. 30, 1968. Discharge computed from relation between discharge, head, and gate openings. Since November 1969, diversion above station from Lake Ocklawaha for boat lockages, through Cross-Florida Barge Canal (see station 02244032) to St. Johns River. Records of gage height for auxiliary station are published as elevations for Lake Ocklawaha (station 02243958) in the section of this report entitled LAKE ELEVATIONS.

COOPERATION.--Gate-opening record provided by U.S. Army Corps of Engineers.

AVERAGE DISCHARGE.--21 years, 1,460 ft^3/s, 1,056,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 9,560 ft^3/s, Feb. 5, 1970; maximum gage height, 9.64 ft, Apr. 12, 1982; gates closed and flow consists of unknown leakage Mar. 9, 1969; minimum gage height, 0.80 ft, June 3, 1969.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 3,460 ft^3/s, Nov. 24; maximum gage height, 6.63 ft, Nov. 25; minimum daily discharge, 335 ft^3/s, Jan. 20; minimum gage height, 1.33 ft, May 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2280	1350	2360	1280	1270	948	1280	727	420	1180	568	856
2	2260	1550	2340	1280	1110	960	1270	443	620	1180	749	1040
3	1370	1540	2060	1280	1040	1100	1110	414	622	1180	856	1140
4	2190	1540	2040	1130	827	1300	1030	345	623	1080	856	1140
5	1520	1540	2100	1070	1100	1360	1040	451	626	920	856	1140
6	1520	1540	2350	1080	1130	1200	1040	534	628	1080	857	1050
7	1530	1330	2560	1130	1130	1130	1050	540	630	1480	858	997
8	1530	1230	2540	1180	1130	1130	1050	543	632	1390	858	996
9	1530	1220	2490	1190	1130	1250	1050	550	635	1320	859	995
10	1530	1010	2430	1180	1130	1290	1020	556	636	1040	859	995
11	1530	919	2450	1190	1130	1230	1130	560	637	1050	1020	994
12	1530	920	2440	1320	1180	1210	1280	565	639	1210	1140	901
13	1520	921	2390	1390	1210	1210	1360	570	642	1430	1140	852
14	1330	921	2330	1120	1210	1210	1360	576	643	1330	956	853
15	1090	921	2270	1270	1210	1200	1360	581	645	1180	859	856
16	1220	922	2020	1220	1310	1200	1350	585	712	1850	859	856
17	1330	923	1590	995	1360	1200	1210	589	753	1570	859	856
18	1380	1300	1380	934	1310	1100	1140	592	753	1230	915	858
19	1380	1620	1250	1080	1230	1040	1140	444	753	683	997	1030
20	1350	1670	1170	335	1090	942	1070	597	828	749	903	1140
21	1380	1860	1180	445	1040	601	1030	600	863	715	855	1140
22	1380	1950	1250	1310	1050	807	1030	602	862	598	855	961
23	1380	2880	1290	1400	1260	2090	909	605	863	1430	855	857
24	1380	3460	1290	1260	1440	1540	785	607	866	1430	854	858
25	1130	2880	1300	1440	1420	884	728	609	1010	1430	855	1060
26	922	2580	1340	1510	1210	1270	788	611	1080	1430	854	1420
27	732	2550	1390	1740	993	889	977	611	1080	1420	855	1760
28	618	1720	1330	1740	945	791	978	612	1080	1420	856	1850
29	620	1280	1280	1270	---	848	974	613	1220	1230	856	1430
30	721	1270	1280	1270	---	1150	968	614	1210	1130	855	1670
31	978	---	1270	1260	---	1170	---	616	---	848	855	---
TOTAL	42161	47317	56760	37299	32595	35250	32507	17462	23211	37213	27229	32551
MEAN	1360	1577	1831	1203	1164	1137	1084	563	774	1200	878	1085
MAX	2280	3460	2560	1740	1440	2090	1360	727	1220	1850	1140	1850
MIN	618	919	1170	335	827	601	728	345	420	598	568	852
AC-FT	83630	93850	112600	73980	64650	69920	64480	34640	46040	73810	54010	64560
IN.	.57	.64	.77	.51	.44	.48	.44	.24	.31	.50	.37	.44

CAL YR 1988 TOTAL 519459 MEAN 1419 MAX 5200 MIN 429 AC-FT 1030000 IN. 7.03
WTR YR 1989 TOTAL 421555 MEAN 1155 MAX 3460 MIN 335 AC-FT 836200 IN. 5.71

ST. JOHNS RIVER

OKLAWAHA RIVER BASIN

02243960 OKLAWAHA RIVER AT RODMAN DAM, NEAR ORANGE SPRINGS, FL--Continued

GAGE HEIGHT, IN FEET ABOVE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.00	4.68	5.57	4.93	4.70	4.17	4.54	3.59	2.44	4.62	3.48	4.19
2	5.73	5.08	6.06	4.92	4.55	4.23	4.52	2.65	2.80	4.62	3.72	4.47
3	5.41	5.14	5.86	4.90	4.30	4.40	4.29	2.64	2.81	4.60	3.91	4.65
4	5.74	5.16	5.82	4.76	3.81	4.73	4.18	2.34	2.79	4.50	3.82	4.67
5	5.47	5.24	5.81	4.56	4.27	4.87	4.22	2.56	2.73	4.02	3.71	4.68
6	5.36	5.23	5.86	4.53	4.45	4.77	4.16	2.89	2.69	3.32	3.60	4.66
7	5.35	5.18	6.05	4.54	4.45	4.60	4.14	2.89	2.64	4.81	3.52	4.62
8	5.35	5.12	6.10	4.62	4.45	4.56	4.11	2.84	2.59	4.72	3.64	4.60
9	5.35	5.08	6.10	4.65	4.45	4.65	4.09	2.80	2.55	4.81	3.93	4.60
10	5.35	4.97	6.06	4.65	4.45	4.77	3.90	2.80	2.47	4.02	3.95	4.60
11	5.37	4.66	6.07	4.65	4.45	4.76	4.28	2.78	2.44	4.04	4.18	4.59
12	5.36	4.60	6.10	4.79	4.50	4.69	4.51	2.69	2.49	4.07	4.54	4.43
13	5.35	4.59	6.05	4.95	4.58	4.61	4.73	2.37	2.53	4.71	4.61	4.22
14	5.28	4.59	6.00	4.65	4.59	4.58	4.77	2.36	2.46	4.79	4.52	4.18
15	4.93	4.59	5.95	4.84	4.59	4.53	4.80	2.61	2.45	4.49	4.33	4.14
16	4.79	4.56	5.80	4.80	4.67	4.49	4.80	2.34	3.49	5.19	4.21	4.08
17	4.87	4.56	5.53	4.51	4.78	4.45	4.65	2.06	3.55	5.27	4.12	4.03
18	5.01	4.75	5.24	4.19	4.76	4.41	4.42	2.17	3.57	5.04	4.22	4.04
19	5.03	5.15	5.10	4.30	4.70	4.33	4.35	2.57	3.57	3.91	4.49	4.26
20	4.99	5.30	4.91	3.60	4.56	4.18	4.23	2.89	3.65	3.52	4.43	4.60
21	5.00	5.42	4.87	4.67	4.41	3.21	4.17	2.94	3.82	3.56	4.32	4.60
22	4.98	5.62	4.90	4.85	4.42	3.46	4.17	2.93	3.88	3.60	4.29	4.54
23	4.98	6.08	4.95	5.06	4.56	5.28	4.07	2.91	3.92	4.76	4.27	4.40
24	4.98	6.59	4.96	4.81	4.91	5.27	3.77	2.59	3.93	4.89	4.22	4.33
25	4.91	6.53	4.96	4.86	4.89	4.25	3.48	2.44	4.08	4.91	4.19	4.52
26	4.71	6.31	4.99	4.86	4.72	4.57	3.44	2.78	4.32	4.92	4.19	4.93
27	4.52	6.26	5.05	5.12	4.42	3.92	3.82	2.97	4.39	4.92	4.17	5.28
28	4.19	5.95	5.04	5.44	4.19	3.69	3.85	2.94	4.42	4.88	4.17	5.48
29	4.13	5.28	5.00	4.93	---	3.85	3.85	2.96	4.54	4.77	4.15	5.17
30	4.10	5.15	4.95	4.83	---	4.10	3.87	2.98	4.62	4.61	4.12	5.27
31	4.24	---	4.95	4.72	---	4.44	---	2.95	---	4.22	4.11	---
MEAN	5.06	5.25	5.51	4.73	4.52	4.41	4.21	2.72	3.29	4.49	4.10	4.56
MAX	6.00	6.59	6.10	5.44	4.91	5.28	4.80	3.59	4.62	5.27	4.61	5.48
MIN	4.10	4.56	4.87	3.60	3.81	3.21	3.44	2.06	2.44	3.32	3.48	4.03

CAL YR 1988 MEAN 4.84 MAX 7.38 MIN 2.48
WTR YR 1989 MEAN 4.40 MAX 6.59 MIN 2.06

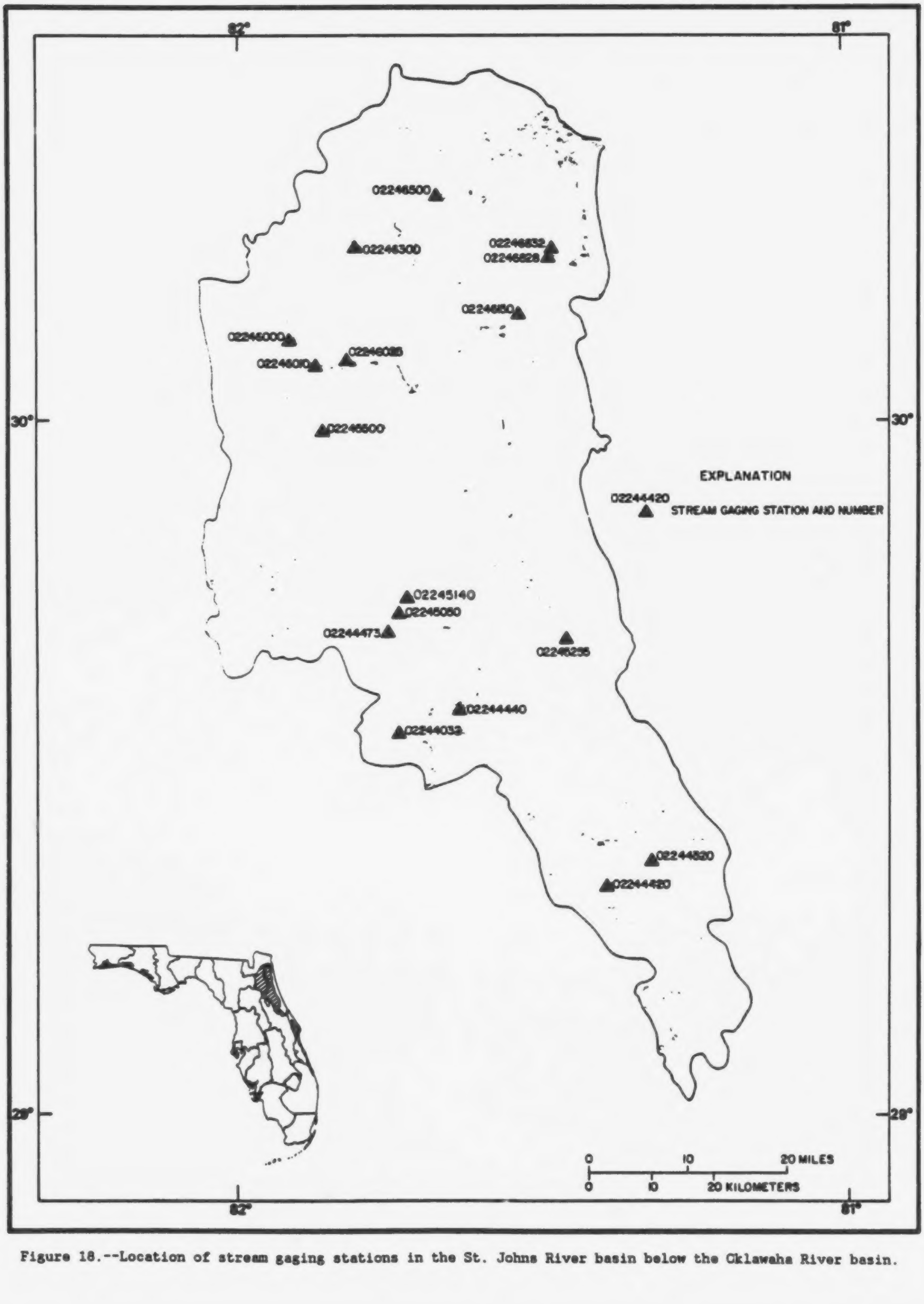

82°
81°
02246500
02246300
02246832
02246828
02246150
02246000
02246025
02246010
30°
02245500
EXPLANATION
02244420
STREAM GAGING STATION AND NUMBER
02245140
02245050
02244473
02245255
02244440
02244032
02244620
02244420
29°
0
10
20 MILES
0
10
20 KILOMETERS

Figure 18.--Location of stream gaging stations in the St. Johns River basin below the Oklawaha River basin.

ST. JOHNS RIVER

ST. JOHNS RIVER BASIN BELOW OKLAWAHA RIVER

02244320 MIDDLE HAW CREEK NEAR KORONA, FL

LOCATION.--Lat 29°21'35", long 81°18'42", in NW¼ sec.19, T.13 S., R.30 E., Flagler County, Hydrologic Unit 03080103, near center of span on downstream side of bridge on State Highway 11, 1.2 mi north of Codys Corner and 7.7 mi southwest of Korona.

DRAINAGE AREA.--78.3 mi^2.

PERIOD OF RECORD.--July 1975 to current year.

REVISED RECORDS.--WDR FL-78-1: 1977.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair.

AVERAGE DISCHARGE.--14 years, 71.9 ft^3/s, 12.47 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,900 ft^3/s, Sept. 30, 1979, gage height, 12.72 ft; no flow for many days in most years; minimum gage height, 4.12 ft, July 3, 1981, but may have been lower during periods of no gage-height record.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 333 ft^3/s, Jan. 24, gage height, 9.39 ft; no flow for many days; minimum gage height, 4.33 ft, June 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.4	.27	40	4.6	104	4.6	.81	.23	.00	19	.07	.26
2	11	.26	33	4.1	88	6.5	.58	.35	.00	14	.03	.24
3	18	.24	27	3.8	75	7.9	.48	.29	.00	8.0	.02	.24
4	24	.24	23	3.5	65	10	.52	.19	.00	5.1	.00	.25
5	42	.25	19	3.1	56	9.7	1.0	.10	.00	5.4	.00	.25
6	50	.26	16	2.7	48	8.5	.85	.00	.00	5.7	.00	.21
7	39	.24	14	2.5	42	8.1	.55	.00	.00	8.6	.00	.20
8	28	.19	13	2.3	37	8.2	.40	.00	.00	9.3	.01	.18
9	21	.16	12	2.1	32	7.8	.29	.00	.00	5.8	.41	.14
10	15	.12	11	1.9	28	7.1	.22	.05	.00	2.8	.56	.11
11	11	.08	11	1.8	24	6.3	.18	.10	.00	1.5	.42	.04
12	8.1	.06	14	1.7	21	5.6	.14	.01	.00	.98	.28	.01
13	6.3	.05	17	1.6	19	4.8	.07	.00	.00	.65	.27	.02
14	4.8	.04	18	1.5	17	4.1	.05	.00	.00	.45	.24	.02
15	3.8	.04	19	1.4	15	3.4	.11	.00	.00	.33	.23	.00
16	3.0	.03	19	1.3	13	2.9	.17	.00	.00	.35	.19	.03
17	2.4	.02	18	1.2	12	2.6	.11	.00	.00	.38	.14	.13
18	2.0	.01	16	1.1	10	2.3	.02	.00	.00	.64	.08	.14
19	1.7	.01	14	.99	9.2	1.9	.00	.00	.00	.73	.04	.13
20	1.5	.02	13	.90	8.1	1.7	.01	.00	.00	.80	.12	.10
21	1.3	.01	12	1.3	7.5	1.4	.04	.00	.00	1.8	.23	.06
22	1.1	.34	11	40	8.5	1.2	.02	.00	.00	3.4	.53	.04
23	.88	29	9.7	226	8.5	1.8	.00	.00	.00	3.1	.59	.13
24	.69	91	9.0	325	7.8	4.6	.00	.00	.00	2.0	.64	.21
25	.57	164	8.4	300	6.9	3.6	.00	.00	.00	1.3	.72	.22
26	.48	145	7.8	249	6.1	2.8	.00	.00	.00	.92	1.2	.28
27	.41	114	7.2	208	5.4	2.4	.14	.00	.00	.60	1.2	.34
28	.34	86	6.6	179	4.7	2.0	.11	.00	.00	.44	.97	2.2
29	.31	64	6.0	156	---	1.7	.01	.00	4.2	.31	.68	1.6
30	.27	50	5.4	136	---	1.4	.04	.00	20	.23	.48	1.0
31	.29	---	5.0	119	---	1.1	---	.00	---	.13	.35	---
TOTAL	306.64	745.94	455.1	1983.39	778.7	138.0	6.92	1.32	24.20	104.74	10.70	8.78
MEAN	9.89	24.9	14.7	64.0	27.8	4.45	.23	.043	.81	3.38	.35	.29
MAX	50	164	40	325	104	10	1.0	.35	20	19	1.2	2.2
MIN	.27	.01	5.0	.90	4.7	1.1	.00	.00	.00	.13	.00	.00
CFSM	.13	.32	.19	.82	.36	.06	.00	.00	.01	.04	.00	.00
IN.	.15	.35	.22	.94	.37	.07	.00	.00	.01	.05	.01	.00

CAL YR 1988 TOTAL 16858.44 MEAN 46.1 MAX 474 MIN .00 CFSM .59 IN. 8.01
WTR YR 1989 TOTAL 4564.43 MEAN 12.5 MAX 325 MIN .00 CFSM .16 IN. 2.17

ST. JOHNS RIVER BASIN BELOW OKLAWAHA RIVER

02244420 LITTLE HAW CREEK NEAR SEVILLE, FL

LOCATION.--Lat 29°19'20", long 81°23'10", in SE¼ sec.32, T.13 S., R.29 E., Flagler County, Hydrologic Unit 03080103, on right bank 600 ft downstream from bridge on State Highway 305, 1.4 mi downstream from Lake Disston, and 6.4 mi east of Seville.

DRAINAGE AREA.--93.0 mi^2.

PERIOD OF RECORD.--January 1951 to current year.

REVISED RECORDS.--WDR FL-75-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 5.74 ft above National Geodetic Vertical Datum of 1929. Prior to Jan. 5, 1953, at site 600 ft upstream at same datum.

REMARKS.--Records fair.

AVERAGE DISCHARGE.--38 years (water years 1952-89), 83.4 ft^3/s, 12.18 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,630 ft^3/s, Oct. 19, 20, 1968, gage height, 9.18 ft; no flow for many days in some years; minimum gage height, 0.14 ft^3/s, July 7, 1981.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 117 ft^3/s, Jan. 23, gage height, 4.51 ft; minimum, 0.70 ft^3/s, part of each day June 27-29, gage height, 0.86 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	16	64	30	105	19	12	14	1.2	5.5	1.7	8.7
2	10	8.9	60	29	103	25	11	8.9	1.1	3.4	6.4	11
3	15	6.9	55	28	103	25	9.8	6.7	1.0	2.2	8.6	12
4	21	6.3	53	26	101	28	12	5.8	.95	1.7	7.7	25
5	14	6.2	51	24	99	32	22	5.3	.96	1.6	5.7	24
6	11	5.9	49	22	97	30	15	4.7	1.2	1.6	4.1	19
7	10	5.4	48	21	93	28	12	4.3	1.3	2.4	2.9	16
8	9.2	5.1	48	20	89	28	10	3.7	1.1	2.3	2.3	15
9	8.4	5.0	47	19	82	26	9.0	3.4	1.1	1.7	4.9	13
10	8.1	4.9	50	19	72	23	8.0	3.6	1.0	1.3	13	12
11	7.8	4.7	54	18	66	21	7.5	5.2	1.0	1.1	13	10
12	7.6	4.6	67	17	61	20	7.6	3.8	1.6	1.1	11	9.1
13	7.1	4.6	72	17	57	19	7.0	3.2	1.2	1.9	16	8.0
14	6.6	4.6	66	16	54	19	6.3	3.0	1.1	1.5	26	7.5
15	6.2	4.4	62	16	52	18	7.4	2.8	1.0	1.3	25	6.8
16	5.9	4.3	60	15	49	17	8.2	2.6	.96	1.3	16	6.2
17	5.5	4.3	58	14	46	17	6.6	2.4	1.5	1.5	11	6.8
18	5.2	4.2	53	14	42	16	5.8	2.3	1.2	5.5	7.9	7.0
19	5.1	4.2	49	13	39	16	5.2	2.2	1.1	12	7.1	6.3
20	5.0	4.2	47	12	37	15	4.8	2.1	1.0	8.9	7.2	5.2
21	4.9	4.2	45	14	35	14	6.6	2.0	.98	11	17	4.8
22	4.5	8.5	44	49	40	14	6.1	2.0	.96	13	36	5.1
23	4.2	81	42	108	36	19	5.2	1.9	.97	11	22	5.6
24	4.0	62	41	93	29	29	4.7	1.8	1.0	8.0	15	5.5
25	3.8	53	40	94	24	23	4.4	1.7	.95	5.7	12	6.9
26	3.6	60	38	99	21	20	4.1	1.6	.82	3.9	16	7.7
27	3.5	65	36	103	20	19	3.8	1.5	.75	2.9	15	11
28	3.4	74	35	105	19	17	3.6	1.5	.71	2.0	14	13
29	3.2	70	34	107	---	16	3.4	1.5	3.2	1.5	12	17
30	3.1	65	32	108	---	15	5.7	1.4	8.5	1.2	10	13
31	7.8	---	31	107	---	14	---	1.3	---	1.3	9.3	---
TOTAL	225.7	657.4	1531	1377	1671	642	234.8	108.2	41.41	121.3	375.8	318.2
MEAN	7.28	21.9	49.4	44.4	59.7	20.7	7.83	3.49	1.38	3.91	12.1	10.6
MAX	21	81	72	108	105	32	22	14	8.5	13	36	25
MIN	3.1	4.2	31	12	19	14	3.4	1.3	.71	1.1	1.7	4.8
CFSM	.08	.24	.53	.48	.64	.22	.08	.04	.01	.04	.13	.11
IN.	.09	.26	.61	.55	.67	.26	.09	.04	.02	.05	.15	.13

CAL YR 1988 TOTAL 17802.58 MEAN 48.6 MAX 386 MIN .48 CFSM .52 IN. 7.12
WTR YR 1989 TOTAL 7303.81 MEAN 20.0 MAX 108 MIN .71 CFSM .22 IN. 2.92

ST. JOHNS RIVER

ST. JOHNS RIVER BASIN BELOW OKLAWAHA RIVER

02244473 RICE CREEK NEAR SPRINGSIDE, FL

LOCATION.--Lat 29°41'17", long 81°44'32", in land grant 40, T.9 S., R.26 E., Putnam County, Hydrologic Unit 03080103, near left bank on downstream side of bridge on State Highway 100, 1.8 mi northwest of Springside, 5.9 mi northwest of Palatka, and 7.5 mi upstream from mouth.

DRAINAGE AREA.--43.2 mi^2.

PERIOD OF RECORD.--October 1973 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1.04 ft above National Geodetic Vertical Datum of 1929 (levels by Wardlin Engineering Associates).

REMARKS.--Records good.

AVERAGE DISCHARGE.--16 years, 43.6 ft^3/s, 13.71 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,990 ft^3/s, Aug. 1, 1978, gage height, 9.80 ft, from rating curve extended above 820 ft^3/s; minimum daily discharge, 2.2 ft^3/s, June 18,19, 1981, July 8-10, 1988; minimum gage height, 2.11 ft, July 10, 1988, June 4, 1989.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 350 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Sept. 2	2200	*223	*6.41				

Minimum daily discharge, 2.5 ft^3/s, June 3,4; minimum gage height, 2.11 ft, June 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	42	5.6	53	14	16	11	5.1	6.0	2.8	9.4	6.7	16
2	68	5.7	34	14	15	32	4.8	6.8	2.6	24	7.6	128
3	43	5.4	26	13	14	40	4.7	5.5	2.5	14	9.1	180
4	48	6.0	22	13	13	36	4.7	4.4	2.5	12	8.4	186
5	47	7.9	19	12	13	36	8.2	3.7	3.9	11	7.0	164
6	35	9.9	17	12	12	30	10	4.1	3.4	8.1	5.9	160
7	23	9.1	16	11	12	24	8.5	5.8	4.3	6.7	5.0	195
8	17	7.7	15	11	11	20	7.0	4.5	4.1	5.4	6.7	198
9	14	6.9	14	11	11	17	6.0	3.8	4.6	4.5	22	168
10	12	6.5	13	11	10	16	5.3	3.5	3.8	3.9	15	131
11	11	6.3	15	11	9.7	14	4.9	4.2	3.2	3.5	11	101
12	9.5	6.3	32	11	9.5	13	5.4	3.7	5.3	3.4	9.5	74
13	8.6	6.4	45	11	9.1	11	5.4	3.4	4.6	8.0	10	53
14	7.9	6.5	45	11	9.0	11	5.2	3.4	3.5	12	13	60
15	7.5	6.5	37	11	8.8	9.8	6.7	3.1	3.0	10	32	96
16	7.1	6.3	31	11	8.5	9.2	12	2.9	2.9	8.6	36	109
17	6.7	6.2	31	10	8.3	8.7	11	2.8	2.9	8.5	34	120
18	6.4	6.7	29	9.7	8.4	8.4	8.2	2.7	3.0	13	29	198
19	6.2	6.8	26	9.4	8.6	7.9	6.5	2.8	4.3	15	25	146
20	5.9	6.6	23	9.4	8.8	7.4	5.5	2.8	14	17	21	103
21	6.1	6.4	21	13	8.9	7.1	5.0	2.9	20	15	23	75
22	6.0	8.7	20	30	20	6.6	4.8	3.5	28	54	21	53
23	5.6	49	18	67	24	6.8	4.3	3.2	24	102	18	52
24	5.4	97	18	74	18	8.6	3.8	3.2	18	85	14	57
25	5.3	78	17	53	14	8.9	3.5	3.6	19	62	12	67
26	5.1	43	16	37	12	8.2	3.3	3.2	13	41	19	66
27	5.1	28	15	29	12	7.6	3.1	2.9	8.6	26	19	66
28	5.1	35	14	25	11	6.9	2.9	2.7	6.2	18	28	54
29	5.1	113	14	21	---	6.3	2.8	2.8	5.1	12	28	47
30	5.1	98	14	19	---	5.9	3.5	3.1	4.9	9.5	20	40
31	5.3	---	14	18	---	5.7	---	3.0	---	7.8	14	---
TOTAL	485.0	691.4	724	612.5	335.6	441.0	172.1	114.0	228.0	630.3	529.9	3163
MEAN	15.6	23.0	23.4	19.8	12.0	14.2	5.74	3.68	7.60	20.3	17.1	105
MAX	68	113	53	74	24	40	12	6.8	28	102	36	198
MIN	5.1	5.4	13	9.4	8.3	5.7	2.8	2.7	2.5	3.4	5.0	16
CFSM	.36	.53	.54	.46	.28	.33	.13	.09	.18	.47	.40	2.44
IN.	.42	.60	.62	.53	.29	.38	.15	.10	.20	.54	.46	2.72

CAL YR 1988 TOTAL 15306.0 MEAN 41.8 MAX 1180 MIN 2.2 CFSM .97 IN. 13.18
WTR YR 1989 TOTAL 8126.8 MEAN 22.3 MAX 198 MIN 2.5 CFSM .52 IN. 7.00

ST. JOHNS RIVER BASIN BELOW OKLAWAHA RIVER

02244473 RICE CREEK NEAR SPRINGSIDE, FL--Continued

GAGE HEIGHT, IN FEET ABOVE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.51	2.58	4.81	3.31	3.43	3.17	2.58	2.68	2.19	2.84	2.66	3.39
2	5.01	2.60	4.34	3.29	3.37	4.32	2.54	2.75	2.15	3.94	2.75	5.67
3	4.58	2.57	4.00	3.27	3.31	4.63	2.53	2.61	2.13	3.30	2.90	6.17
4	4.70	2.62	3.77	3.21	3.26	4.52	2.53	2.48	2.14	3.12	2.83	6.21
5	4.68	2.80	3.61	3.15	3.21	4.49	2.90	2.40	2.34	3.05	2.69	6.08
6	4.31	2.98	3.50	3.12	3.17	4.26	3.10	2.43	2.27	2.80	2.58	6.06
7	3.78	2.91	3.42	3.10	3.13	3.97	2.94	2.64	2.39	2.66	2.48	6.26
8	3.46	2.78	3.35	3.09	3.10	3.74	2.78	2.49	2.37	2.52	2.60	6.28
9	3.26	2.71	3.30	3.08	3.06	3.59	2.68	2.39	2.42	2.41	3.80	6.11
10	3.14	2.67	3.26	3.06	3.00	3.50	2.61	2.35	2.32	2.34	3.36	5.85
11	3.03	2.66	3.38	3.07	2.96	3.40	2.56	2.43	2.24	2.28	3.08	5.59
12	2.94	2.66	4.34	3.09	2.94	3.29	2.62	2.38	2.51	2.26	2.94	5.29
13	2.86	2.67	4.77	3.11	2.90	3.19	2.62	2.33	2.42	2.79	3.02	4.96
14	2.80	2.68	4.78	3.09	2.89	3.13	2.59	2.32	2.28	3.14	3.21	5.08
15	2.76	2.68	4.52	3.06	2.87	3.06	2.74	2.28	2.21	3.01	4.32	5.53
16	2.73	2.65	4.26	3.04	2.84	3.00	3.26	2.25	2.20	2.85	4.48	5.67
17	2.69	2.65	4.26	2.99	2.83	2.95	3.13	2.23	2.20	2.84	4.42	5.75
18	2.66	2.70	4.18	2.95	2.84	2.92	2.90	2.22	2.21	3.19	4.20	6.28
19	2.64	2.70	4.02	2.93	2.87	2.88	2.73	2.22	2.39	3.41	3.97	5.96
20	2.61	2.68	3.86	2.93	2.90	2.82	2.62	2.22	3.28	3.51	3.74	5.61
21	2.63	2.66	3.76	3.20	2.91	2.79	2.57	2.23	3.67	3.35	3.87	5.30
22	2.62	2.84	3.68	4.16	3.68	2.74	2.54	2.32	4.13	4.82	3.76	4.95
23	2.58	4.63	3.59	5.19	3.93	2.76	2.48	2.28	3.91	5.60	3.57	4.93
24	2.56	5.37	3.56	5.30	3.59	2.94	2.42	2.26	3.57	5.42	3.29	5.03
25	2.55	5.14	3.50	4.96	3.37	2.97	2.38	2.33	3.63	5.11	3.15	5.19
26	2.53	4.55	3.43	4.53	3.25	2.90	2.34	2.28	3.24	4.64	3.65	5.18
27	2.53	4.05	3.37	4.19	3.18	2.84	2.31	2.22	2.85	4.05	3.64	5.18
28	2.53	4.31	3.33	3.96	3.12	2.77	2.28	2.18	2.62	3.54	4.11	4.98
29	2.52	5.49	3.31	3.78	---	2.71	2.26	2.20	2.49	3.18	4.15	4.84
30	2.53	5.39	3.30	3.65	---	2.67	2.36	2.25	2.47	2.94	3.72	4.62
31	2.55	---	3.31	3.54	---	2.65	---	2.23	---	2.77	3.34	---
MEAN	3.14	3.28	3.80	3.50	3.14	3.28	2.63	2.35	2.64	3.34	3.43	5.47
MAX	5.01	5.49	4.81	5.30	3.93	4.63	3.26	2.75	4.13	5.60	4.48	6.28
MIN	2.52	2.57	3.26	2.93	2.83	2.65	2.26	2.18	2.13	2.26	2.48	3.39

CAL YR 1988 MEAN 3.45 MAX 8.25 MIN 2.13
WTR YR 1989 MEAN 3.33 MAX 6.28 MIN 2.13

ST. JOHNS RIVER BASIN BELOW OKLAWAHA RIVER

02245050 ETONIA CREEK AT BARDIN, FL

LOCATION.--Lat 29°43'00", long 81°43'31", in NW¼ sec.17, T.9 S., R.26 E., Putnam County, Hydrologic Unit 03080103, near left bank on downstream side of bridge on Bardin Road, 0.2 mi north of Bardin, 4.6 mi upstream from mouth, and 6.2 mi northwest of Palatka.

DRAINAGE AREA.--219 mi^2.

PERIOD OF RECORD.--October 1973 to current year.

GAGE.--Water-stage recorder. Datum of gage is 7.60 ft above National Geodetic Vertical Datum of 1929 (levels by Wardlin Engineering Associates).

REMARKS.--Records poor. Records include an appreciable amount of ground-water flow from Hudson Pulp and Paper Corporation production wells.

AVERAGE DISCHARGE.--16 years, 98.3 ft^3/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,210 ft^3/s, May 12, 1979, gage height, 7.74 ft; minimum daily discharge, 35 ft^3/s, Apr. 7, 1982, estimated; minimum gage height, 0.70 ft, Apr. 7, 1982, estimated.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 244 ft^3/s, Sept. 2, gage height, 4.57 ft; minimum, 52 ft^3/s, Aug. 5,8, gage height, 1.24 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	146	72	110	83	81	74	66	63	54	60	55	107
2	141	71	101	83	80	102	65	64	54	63	56	212
3	129	70	96	82	79	107	65	64	53	58	56	196
4	150	71	93	81	78	104	65	61	53	57	55	135
5	148	77	91	80	77	106	72	59	53	56	54	162
6	128	84	89	79	76	99	75	58	54	56	53	200
7	113	78	87	79	76	93	71	59	57	55	53	154
8	107	75	85	78	75	91	68	57	56	54	55	126
9	102	73	85	78	74	88	66	57	57	54	56	110
10	99	72	84	77	74	85	65	57	55	54	55	93
11	96	71	86	77	73	82	64	60	55	55	55	78
12	94	71	119	77	73	80	64	58	58	54	55	71
13	91	71	131	78	72	78	64	57	56	55	57	72
14	88	71	120	77	72	76	64	57	56	59	60	91
15	86	70	108	76	72	75	65	56	55	57	64	83
16	85	70	102	76	71	74	68	55	55	55	63	77
17	83	71	103	75	71	73	66	55	55	59	60	113
18	81	74	101	74	71	72	64	54	54	59	58	161
19	80	74	97	74	71	72	63	54	56	57	56	128
20	79	73	94	74	72	71	62	54	62	57	57	110
21	80	72	92	78	71	70	61	54	65	57	59	88
22	78	74	90	97	82	70	61	56	61	81	62	82
23	76	156	89	136	90	70	60	55	62	111	64	87
24	75	191	88	126	83	73	59	55	72	96	60	96
25	74	150	88	106	78	72	59	58	80	77	59	125
26	73	114	86	96	76	71	58	57	68	67	58	129
27	73	101	85	91	75	70	58	56	63	63	73	118
28	72	162	85	88	74	69	57	55	60	60	116	137
29	72	169	84	85	---	68	57	56	58	58	95	151
30	72	129	83	84	---	68	58	57	58	57	76	139
31	72	---	83	82	---	67	---	55	---	56	71	---
TOTAL	2943	2777	2935	2627	2117	2470	1910	1773	1755	1917	1926	3631
MEAN	94.9	92.6	94.7	84.7	75.6	79.7	63.7	57.2	58.5	61.8	62.1	121
MAX	150	191	131	136	90	107	75	64	80	111	116	212
MIN	72	70	83	74	71	67	57	54	53	54	53	71

CAL YR 1988 TOTAL 37414 MEAN 102 MAX 782 MIN 50
WTR YR 1989 TOTAL 28781 MEAN 78.9 MAX 212 MIN 53

ST. JOHNS RIVER BASIN BELOW OKLAWAHA RIVER

02245140 SIMMS CREEK NEAR BARDIN, FL

LOCATION.--Lat 29°44'07", long 81°42'36", in NE¼ sec.9, T.9 S., R.26 E., Putnam County, Hydrologic Unit 03080103, on right bank 0.4 mi downstream from bridge on Simms Creek Road, 1.7 mi northeast of Bardin, 2.7 mi upstream from Etonia Creek, and 6.7 mi northwest of Palatka.

DRAINAGE AREA.--47.3 mi^2.

PERIOD OF RECORD.--October 1973 to September 1975, March 1976 to current year.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Wardlin Engineering Associates). Prior to Feb. 26, 1976, at bridge 0.4 mi upstream at datum 7.26 ft higher.

REMARKS.--Estimated daily discharges: July 27 to Aug. 2. Records good.

AVERAGE DISCHARGE.--15 years (water years 1974-75, 1977-89), 45.7 ft^3/s, 13.12 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,490 ft^3/s, Dec. 7, 1979, gage height, 13.78 ft; minimum, 4.0 ft^3/s, July 10, 1988; minimum gage height, 6.86 ft, July 27,28, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 650 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Sept. 30	0600	*201	*11.42				

Minimum discharge, 4.9 ft^3/s, June 4, gage height, 6.90 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23	8.4	42	15	15	13	8.8	16	5.7	20	15	51
2	20	8.4	32	15	15	33	8.5	15	5.4	39	13	97
3	19	8.2	26	15	14	34	8.5	11	5.2	37	16	139
4	30	9.2	23	14	14	27	8.8	9.1	5.2	32	15	124
5	25	12	21	14	14	24	12	8.1	5.8	27	13	102
6	20	16	19	13	13	21	13	7.6	6.1	29	11	121
7	17	13	18	13	13	19	11	7.9	6.9	40	10	131
8	15	11	17	13	12	17	10	7.2	6.8	33	9.4	112
9	13	10	17	13	12	17	9.4	6.6	6.9	21	9.8	92
10	13	9.6	16	13	12	16	8.8	7.1	6.1	15	10	67
11	12	9.4	18	13	12	15	8.5	11	5.8	12	9.8	50
12	11	9.4	44	13	11	14	8.8	10	8.7	12	9.7	37
13	11	9.4	49	13	11	14	8.8	8.6	6.7	17	12	31
14	10	9.5	44	13	11	13	8.1	8.0	5.8	44	25	36
15	10	9.4	35	13	11	12	9.0	7.2	5.6	43	29	57
16	9.7	9.2	30	12	10	12	11	6.6	5.3	31	21	36
17	9.3	9.1	31	12	10	11	9.9	6.3	5.1	31	16	29
18	9.0	9.0	28	12	10	11	8.9	6.0	5.3	26	14	48
19	8.9	9.0	26	11	11	11	8.2	5.9	9.2	20	15	57
20	8.8	8.9	24	12	11	10	7.7	5.7	12	17	15	57
21	9.1	8.8	22	14	11	9.9	7.4	5.7	20	16	17	46
22	8.8	11	21	28	16	9.6	7.2	6.4	19	58	26	34
23	8.4	67	20	57	20	9.8	7.0	6.4	20	100	22	43
24	8.2	67	19	47	17	11	6.7	6.1	60	119	17	52
25	8.2	43	18	33	15	11	6.5	6.3	44	95	14	63
26	8.0	29	17	25	14	10	6.2	6.3	25	58	14	75
27	8.0	22	17	21	13	9.9	6.1	5.9	17	39	20	75
28	8.0	70	16	19	13	9.5	5.9	5.6	13	31	20	88
29	7.9	90	16	18	---	9.1	5.8	5.7	11	25	21	147
30	7.9	58	16	17	---	9.1	8.3	6.9	16	21	17	194
31	8.2	---	16	16	---	9.4	---	6.3	---	18	16	---
TOTAL	385.4	663.9	758	557	361	452.3	254.8	238.5	374.6	1126	492.7	2291
MEAN	12.4	22.1	24.5	18.0	12.9	14.6	8.49	7.69	12.5	36.3	15.9	76.4
MAX	30	90	49	57	20	34	13	16	60	119	29	194
MIN	7.9	8.2	16	11	10	9.1	5.8	5.6	5.1	12	9.4	29
CFSM	.26	.47	.52	.38	.27	.31	.18	.16	.26	.77	.34	1.61
IN.	.30	.52	.60	.44	.28	.36	.20	.19	.29	.89	.39	1.80

CAL YR 1988 TOTAL 12334.2 MEAN 33.7 MAX 685 MIN 4.1 CFSM .71 IN. 9.70
WTR YR 1989 TOTAL 7955.2 MEAN 21.8 MAX 194 MIN 5.1 CFSM .46 IN. 6.26

ST. JOHNS RIVER BASIN BELOW OKLAWAHA RIVER

02245255 DEEP CREEK NEAR HASTINGS, FL

LOCATION.--Lat 29°40'52", long 81°26'56", in NW¼ sec.35, T.9 S., R.28 E., St. Johns County, Hydrologic Unit 03080103, near right bank at downstream side of bridge on county road, 1.3 mi upstream from Sixteenmile Creek, and 4.2 mi southeast of Hastings.

DRAINAGE AREA.--20.7 mi^2.

PERIOD OF RECORD.--June 1975 to current year.

GAGE.--Water-stage recorder. Datum of gage is 6.99 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Oct. 1-3, July 7-20,26-31. Records fair except for estimated daily discharges, which are poor.

AVERAGE DISCHARGE.--14 years, 8.16 ft^3/s, 5.35 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 308 ft^3/s, Sept. 28, 1984, gage height, 7.78 ft; maximum gage height, 8.03 ft, June 18, 1982; no flow for many days in most years; minimum gage height, 2.89 ft, Aug. 9, 1976.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 175 ft^3/s and maximum(*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 23	1500	*213	*7.26	Jan. 22	2200	182	7.09

Minimum daily discharge, 0.05 ft^3/s, Aug. 8,9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.7	2.4	5.0	2.0	3.7	6.3	4.0	2.7	.43	.56	.07	.12
2	3.3	1.9	4.0	2.7	3.3	7.3	4.9	3.0	.42	.47	.09	.17
3	2.9	1.5	3.4	2.2	2.7	5.4	5.7	1.0	.37	.27	.31	.13
4	2.6	2.3	2.9	2.3	2.5	10	6.8	.81	.28	.20	.12	.13
5	2.3	4.0	2.8	2.1	2.1	15	3.2	1.2	.34	.18	.09	.14
6	1.9	3.5	2.3	2.2	1.9	9.0	2.3	3.3	.64	.16	.08	.12
7	1.6	2.1	2.1	2.0	2.2	7.2	3.4	2.2	.38	.14	.06	.11
8	1.5	1.9	1.9	2.0	2.1	6.8	4.3	.88	.26	.12	.05	.10
9	1.4	1.7	1.9	1.9	2.0	5.5	4.8	1.0	.22	.11	.05	.13
10	1.4	1.5	2.5	1.8	3.3	5.2	5.4	3.1	.18	.10	.06	.22
11	1.3	1.6	4.3	1.9	3.5	8.1	3.8	5.7	.17	.09	.11	.22
12	1.3	1.6	13	1.9	2.9	8.2	2.9	1.1	.22	.08	.08	.20
13	1.2	1.6	17	1.7	4.0	7.4	4.2	.68	.16	.08	.08	.19
14	1.1	1.7	9.1	1.7	4.4	6.7	2.5	.59	.16	.07	.11	.37
15	1.1	1.5	6.4	1.5	5.3	6.3	5.7	.50	.15	.07	.13	.89
16	1.2	1.5	5.4	1.7	4.3	5.9	8.8	.59	.15	.06	.08	.58
17	1.1	1.4	5.6	1.5	4.8	7.4	1.8	.64	.22	.06	.07	1.1
18	1.1	1.5	4.4	1.5	6.1	7.9	1.2	.74	.18	.07	.06	3.9
19	1.1	1.6	3.6	1.6	7.0	7.8	1.4	.68	.25	.08	.09	1.8
20	1.1	1.5	3.2	1.4	6.4	7.5	2.6	.43	.16	.10	.08	1.2
21	1.5	1.6	3.0	1.7	6.1	7.6	1.7	18	.20	.13	.17	1.1
22	1.3	7.7	2.9	55	8.8	3.8	3.0	15	.46	.17	.12	1.4
23	1.1	161	2.8	97	4.7	6.6	3.0	1.4	.30	.15	.09	5.3
24	1.0	66	2.7	41	3.9	8.3	3.5	.81	.51	.13	.07	3.0
25	.95	28	2.5	23	2.4	6.8	3.5	.71	.24	.12	.33	4.7
26	.92	20	2.2	16	2.1	8.4	3.3	.58	.18	.11	.70	5.1
27	.89	14	2.0	11	2.5	7.2	2.9	.49	.16	.10	.26	6.7
28	.86	11	3.1	8.4	4.5	5.8	2.1	.44	.15	.09	.17	86
29	1.0	7.6	3.2	6.4	---	6.0	2.6	.43	.15	.09	.13	40
30	1.0	6.1	3.3	5.5	---	4.0	2.0	.41	.52	.08	.12	13
31	2.3	---	3.4	4.6	---	2.9	---	.38	---	.08	.10	---
TOTAL	47.02	361.3	131.9	307.2	109.5	218.3	107.3	69.49	8.21	4.32	4.13	178.12
MEAN	1.52	12.0	4.25	9.91	3.91	7.04	3.58	2.24	.27	.14	.13	5.94
MAX	3.7	161	17	97	8.8	15	8.8	18	.64	.56	.70	86
MIN	.86	1.4	1.9	1.4	1.9	2.9	1.2	.38	.15	.06	.05	.10
CFSM	.07	.58	.21	.48	.19	.34	.17	.11	.01	.01	.01	.29
IN.	.08	.65	.24	.55	.20	.39	.19	.12	.01	.01	.01	.32

CAL YR 1988 TOTAL 2873.55 MEAN 7.85 MAX 200 MIN .26 CFSM .38 IN. 5.16
WTR YR 1989 TOTAL 1546.79 MEAN 4.24 MAX 161 MIN .05 CFSM .20 IN. 2.78

ST. JOHNS RIVER BASIN BELOW OKLAWAHA RIVER

02245500 SOUTH FORK BLACK CREEK NEAR PENNEY FARMS, FL

LOCATION.--Lat 29°58'45", long 81°51'08", in NE¼ sec.13, T.6 S., R.24 E., Clay County, Hydrologic Unit 03080103, on right bank at upstream side of bridge on State Highway 16, 0.7 mi downstream from Greens Creek, 2.5 mi west of Penney Farms, 9.5 mi west of Green Cove Springs, and 24 mi upstream from mouth of Black Creek.

DRAINAGE AREA.--134 mi^2.

PERIOD OF RECORD.--October 1939 to current year. Monthly discharge only for some periods, published in WSP 1304.

REVISED RECORDS.--WSP 1234: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 9.82 ft above National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers). Prior to July 18, 1940, nonrecording gage at same site and datum.

REMARKS.--Estimated daily dischages: Nov. 21-30, Dec. 4-18. Records good.

AVERAGE DISCHARGE.--50 years, 155 ft^3/s, 15.71 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,900 ft^3/s, Oct. 19, 1944, gage height, 26.33 ft, from floodmarks, from rating curve extended above 11,000 ft^3/s; minimum, about 9.4 ft^3/s, June 24, 1955; minimum gage height, 0.18 ft, June 4,17,18, 1989.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,300 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Sept. 2	1500	*1,360	*12.69	No other peak greater than base discharge.			

Minimum discharge, 12 ft^3/s, June 4,17,18, gage height, 0.18 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	93	52	104	60	51	45	30	85	13	53	51	851
2	96	51	94	59	49	95	27	99	13	137	115	1190
3	96	49	87	58	48	97	27	69	13	143	105	854
4	117	54	84	56	46	83	27	43	12	69	79	523
5	105	64	80	53	45	79	44	32	17	68	56	771
6	93	84	77	52	43	70	79	27	21	58	42	604
7	85	70	74	52	42	63	57	24	30	41	35	382
8	80	60	71	51	42	57	57	22	26	32	31	514
9	76	55	69	50	41	54	44	21	38	28	30	389
10	74	52	67	49	39	51	36	22	26	26	54	241
11	71	51	122	50	38	47	35	36	20	35	44	173
12	69	52	199	51	38	44	45	34	17	25	38	136
13	66	53	160	52	37	42	42	26	16	37	57	112
14	64	57	133	50	36	40	36	23	14	75	166	101
15	63	56	112	49	36	38	38	21	13	47	361	214
16	62	54	96	48	36	36	56	19	13	51	267	214
17	59	91	90	46	35	35	52	18	12	47	172	195
18	58	77	85	44	36	34	39	17	13	42	108	348
19	57	67	81	43	37	33	32	17	15	37	83	405
20	58	61	77	43	38	31	28	16	25	33	93	299
21	63	90	75	47	37	30	29	17	27	73	101	192
22	58	134	72	111	78	30	29	23	40	492	213	143
23	55	205	70	147	77	52	26	22	30	485	114	132
24	53	215	68	114	62	90	24	20	85	232	99	139
25	54	162	66	86	53	64	22	20	56	135	385	183
26	53	140	64	74	49	50	21	18	34	92	324	378
27	52	122	62	67	47	43	20	17	26	69	221	379
28	51	113	61	63	45	38	19	15	21	54	302	688
29	51	130	61	60	---	35	16	15	20	45	599	1030
30	50	116	60	57	---	33	28	14	36	62	458	572
31	51	---	60	53	---	34	---	14	---	67	257	---
TOTAL	2133	2637	2681	1895	1261	1573	1067	866	742	2890	5060	12352
MEAN	68.8	87.9	86.5	61.1	45.0	50.7	35.6	27.9	24.7	93.2	163	412
MAX	117	215	199	147	78	97	79	99	85	492	599	1190
MIN	50	49	60	43	35	30	18	14	12	25	30	101
CFSM	.51	.66	.65	.46	.34	.38	.27	.21	.16	.70	1.22	3.07
IN.	.59	.73	.74	.53	.35	.44	.30	.24	.21	.80	1.40	3.43

CAL YR 1988 TOTAL 60017 MEAN 164 MAX 5450 MIN 14 CFSM 1.22 IN. 16.66
WTR YR 1989 TOTAL 35157 MEAN 96.3 MAX 1190 MIN 12 CFSM .72 IN. 9.76

ST. JOHNS RIVER

ST. JOHNS RIVER BASIN BELOW OKLAWAHA RIVER

02246000 NORTH FORK BLACK CREEK NEAR MIDDLEBURG, FL

LOCATION.--Lat 30°06'47", long 81°54'24", in NE¼ sec.33, T.4 S., R.24 E., Clay County, Hydrologic Unit 03080103, on left bank 0.3 mi upstream from Big Branch, 4 mi northwest of Middleburg, and 7.5 mi upstream from confluence with South Fork.

DRAINAGE AREA.--177 mi^2.

PERIOD OF RECORD.--October 1931 to current year.

REVISED RECORDS.--WSP 852: 1933 (m). WDR FL-75-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 0.62 ft above National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers). Prior to Mar. 31, 1933, nonrecording gage at site 0.4 mi downstream at different datum. Mar. 31, 1933 to Apr. 28, 1955, nonrecording gage at present site and datum.

REMARKS.--Records fair. Stage-discharge relation affected by tide on some days.

AVERAGE DISCHARGE.--58 years, 192 ft^3/s, 14.73 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,600 ft^3/s, May 3, 1964, gage height, 23.91 ft; minimum observed, 3.6 ft^3/s, June 8, 1935, gage height, 0.26 ft.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in June 1919 reached a stage of 25.3 ft, from information by local resident, discharge, 15,000 ft^3/s.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,300 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Sept. 29	1800	*3,640	*16.67	No other peak greater than base discharge.			

Minimum discharge, 10 ft^3/s, June 3-5, gage height, 0.50 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	91	43	76	45	50	40	41	27	11	169	94	303
2	88	32	71	47	43	80	32	44	11	120	361	319
3	96	29	67	46	39	134	28	41	10	140	416	354
4	212	33	63	44	37	125	27	29	10	126	214	438
5	209	77	59	42	34	119	61	24	16	99	138	803
6	188	133	54	39	32	100	75	20	24	78	104	948
7	160	75	51	40	31	78	61	18	26	67	82	664
8	133	62	51	41	31	69	49	16	26	59	67	657
9	110	51	50	39	31	65	38	15	48	54	58	463
10	95	43	49	40	29	70	34	30	46	51	58	269
11	83	39	55	42	28	68	37	156	30	50	78	184
12	72	37	121	42	27	55	45	111	25	48	84	137
13	68	36	125	41	27	43	44	67	20	42	69	111
14	67	43	106	40	27	37	36	43	17	45	108	101
15	63	43	91	40	27	34	38	32	14	49	384	110
16	58	40	79	38	26	32	67	27	13	53	568	152
17	50	44	75	35	26	31	63	23	15	53	325	138
18	51	49	70	35	27	30	48	20	22	55	194	147
19	43	49	65	34	29	29	36	19	32	84	122	138
20	49	44	61	37	30	28	30	17	235	91	90	114
21	58	39	58	37	30	27	28	17	356	322	76	93
22	48	42	57	61	91	29	28	19	261	983	112	80
23	44	147	56	95	107	56	26	21	214	961	154	80
24	41	152	56	86	80	73	23	19	356	757	257	94
25	38	115	52	75	70	61	21	19	337	532	252	253
26	36	104	50	67	60	46	19	19	193	282	398	386
27	35	90	49	57	49	39	18	17	140	184	428	306
28	34	85	47	51	43	34	17	15	96	125	352	750
29	30	103	45	46	---	31	16	14	81	93	215	3190
30	32	83	45	41	---	31	16	12	148	92	151	2800
31	44	---	44	46	---	41	---	12	---	89	146	---
TOTAL	2426	1962	1998	1469	1161	1735	1102	963	2833	5953	6155	14582
MEAN	78.3	65.4	64.5	47.4	41.5	56.0	36.7	31.1	94.4	192	199	486
MAX	212	152	125	95	107	134	75	156	356	983	568	3190
MIN	30	29	44	34	26	27	16	12	10	42	58	80
CFSM	.44	.37	.36	.27	.23	.32	.21	.18	.53	1.08	1.12	2.75
IN.	.51	.41	.42	.31	.24	.36	.23	.20	.60	1.25	1.29	3.06

CAL YR 1988 TOTAL 72363 MEAN 198 MAX 4510 MIN 12 CFSM 1.12 IN. 15.21
WTR YR 1989 TOTAL 42339 MEAN 116 MAX 3190 MIN 10 CFSM .66 IN. 8.90

ST. JOHNS RIVER BASIN BELOW OKLAWAHA RIVER

02246010 NORTH FORK BLACK CREEK AT MIDDLEBURG, FL

LOCATION.--Lat 30°04'31", long 81°51'51", in SW¼ sec.12, T.5 S., R.24 E., Clay County, Hydrologic Unit 03080103, at downstream side of upstream bridge on State Highway 21, 0.5 mi north of Middleburg, 1.5 mi upstream from confluence with South Fork, and 14 mi upstream from mouth of Black Creek.

DRAINAGE AREA.--197 mi^2.

PERIOD OF RECORD.--October 1981 to current year (gage heights only).

GAGE.--Water-stage recorder. Datum of gage is 9.80 ft below National Geodetic Vertical Datum of 1929. Prior to Feb. 28, 1986, at site 50 ft downstream at present datum.

REMARKS.--Stage affected by tide at times.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 16.10 ft, Sept. 8, 1988; minimum, 9.34 ft, Dec. 23, 1981.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 15.04 ft, Sept. 29; minimum, 10.39 ft, Apr. 7.

GAGE HEIGHT, IN FEET ABOVE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12.82	12.81	11.92	11.81	11.47	11.38	11.14	11.71	11.75	12.31	11.38	12.27
2	12.63	12.51	11.78	11.77	11.36	12.06	11.43	11.50	11.52	12.38	11.52	12.29
3	12.57	12.28	11.66	11.72	11.26	12.22	11.46	11.53	11.37	12.21	11.76	12.17
4	12.49	12.39	11.49	11.51	11.24	12.04	11.42	11.70	11.36	11.98	11.96	12.41
5	12.70	12.24	11.98	11.72	11.52	11.90	11.37	11.77	11.36	11.97	11.85	12.71
6	12.93	11.84	12.06	11.71	11.76	11.79	11.27	11.63	11.27	11.85	11.59	12.63
7	13.17	11.54	11.90	11.53	11.79	11.75	11.20	11.59	11.29	11.55	11.57	12.71
8	13.32	11.53	11.81	11.58	11.71	12.14	11.11	11.71	11.26	11.27	11.67	12.94
9	13.24	11.58	11.77	11.66	11.74	12.48	11.14	11.70	11.13	11.24	12.08	12.87
10	13.16	11.69	11.96	11.99	11.81	12.89	11.41	11.43	10.89	11.34	12.35	12.68
11	12.97	11.70	12.18	12.22	11.74	12.97	11.77	11.37	11.00	11.39	12.25	12.56
12	12.66	12.03	12.59	12.21	11.55	12.66	12.13	11.51	11.24	11.34	12.13	12.48
13	12.65	12.20	12.72	11.89	11.54	12.33	12.18	11.54	11.28	11.27	12.13	12.54
14	12.79	12.01	12.32	11.92	11.42	12.11	12.06	11.54	11.08	11.12	12.17	12.61
15	12.68	11.92	12.06	11.88	11.24	11.83	11.90	11.59	11.00	11.20	12.23	12.51
16	12.58	12.04	12.00	11.52	11.20	11.58	11.78	11.56	10.99	11.34	12.14	12.39
17	12.46	11.97	12.08	11.54	11.54	11.67	11.74	11.57	11.05	11.29	12.01	12.28
18	12.41	11.97	11.99	11.62	12.29	11.76	11.66	11.61	11.09	11.28	12.02	12.35
19	12.33	12.26	11.90	11.46	12.40	11.70	11.59	11.69	11.27	11.41	12.04	12.59
20	12.56	12.18	11.76	11.35	12.39	12.05	11.57	11.72	11.44	11.52	12.15	12.56
21	12.85	11.85	11.73	11.77	12.24	11.89	12.03	11.69	11.50	11.79	12.15	12.48
22	12.64	12.07	11.69	12.61	12.02	11.80	12.22	11.65	11.47	12.26	12.07	12.33
23	12.60	12.52	11.86	12.96	11.54	12.41	11.95	11.50	11.51	12.09	11.84	12.05
24	12.57	12.57	11.90	12.83	11.10	12.40	11.65	11.35	11.62	11.95	11.65	12.30
25	12.48	12.55	11.77	12.48	11.42	12.10	11.57	11.37	11.58	11.80	11.74	13.09
26	12.48	12.40	11.83	12.15	11.53	11.91	11.37	11.44	11.67	11.82	11.97	12.91
27	12.46	12.12	12.09	11.83	11.28	11.84	11.36	11.41	11.69	11.79	12.23	12.73
28	12.45	11.73	11.86	11.89	11.14	11.65	11.52	11.59	11.64	11.52	12.24	13.72
29	12.29	11.71	11.54	11.98	---	11.53	11.71	12.29	11.60	11.38	12.17	14.68
30	12.46	11.96	11.73	11.74	---	11.37	11.73	12.21	11.82	11.43	12.14	14.33
31	12.83	---	11.83	11.48	---	11.16	---	11.96	---	11.48	12.10	---
MEAN	12.68	12.07	11.93	11.88	11.62	11.98	11.61	11.63	11.36	11.63	11.98	12.71
MAX	13.32	12.81	12.72	12.96	12.40	12.97	12.22	12.29	11.82	12.38	12.35	14.68
MIN	12.29	11.53	11.49	11.35	11.10	11.16	11.11	11.35	10.89	11.12	11.38	12.05

CAL YR 1988 MEAN 12.00 MAX 15.50 MIN 11.01
WTR YR 1989 MEAN 11.93 MAX 14.68 MIN 10.89

ST. JOHNS RIVER BASIN BELOW OKLAWAHA RIVER

02246150 BIG DAVIS CREEK AT BAYARD, FL

LOCATION.--Lat 30°09'05", long 81°31'35", in land grant 37, T.4 S., R.28 E., Duval County, Hydrologic Unit 03080103, at downstream end of culvert on U. S. Highway 1, 0.8 mi northwest of Bayard, 2.0 mi upstream from mouth, and 14.8 mi southeast of Union Station in Jacksonville.

DRAINAGE AREA.--13.6 mi^2.

PERIOD OF RECORD.--Annual maximum, water years 1964-66, 1970-74; August 1966 to September 1969 and June 1974 to current year.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929. Feb. 18, 1965 to Aug. 21, 1966, crest-stage gage at same site and datum.

REMARKS.--Records fair.

AVERAGE DISCHARGE.--18 years (water years 1967-69, 1975-89), 10.5 ft^3/s, 10.48 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,170 ft^3/s, Aug. 29, 1968, gage height, 10.47 ft; minimum, 0.05 ft^3/s, July 25, 1977, June 19, 1981, gage height, 3.80 ft.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 100 ft^3/s, and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Sept. 25	0500	*90	*7.01				

Minimum discharge, 0.24 ft^3/s, June 12,13, gage height, 4.11 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	29	5.5	9.6	7.1	5.0	7.0	7.8	8.5	1.5	1.9	2.7	.51
2	26	5.0	5.8	7.1	8.0	8.2	6.9	8.2	1.5	2.1	2.9	.52
3	16	4.4	8.3	7.0	8.1	10	6.1	6.4	1.5	2.0	2.9	.99
4	19	8.2	8.3	6.8	5.8	9.3	5.7	5.3	1.5	1.8	1.3	4.1
5	15	10	8.1	6.6	3.3	8.4	5.8	4.3	1.5	2.0	2.0	8.2
6	8.9	8.3	7.5	6.7	3.1	5.8	5.9	3.9	.66	2.2	2.1	6.0
7	9.2	7.8	8.1	6.9	2.9	6.7	5.4	3.7	1.3	4.0	2.1	4.4
8	8.0	4.1	7.4	7.0	6.6	7.3	5.4	3.5	1.9	2.7	2.1	3.8
9	5.8	6.0	7.3	6.8	8.2	6.8	5.3	3.4	2.0	2.2	2.0	3.4
10	3.4	6.5	7.6	5.6	7.9	6.5	5.0	4.2	.94	2.2	2.0	3.1
11	6.4	6.3	8.2	6.0	7.6	6.4	3.9	4.3	.41	2.1	2.0	2.5
12	6.2	6.3	11	6.9	6.7	6.0	4.0	5.7	.31	2.2	2.1	1.6
13	5.9	5.9	8.7	6.6	6.2	6.1	6.1	4.2	.34	2.1	2.0	1.3
14	5.7	5.7	7.0	7.5	6.1	5.9	5.9	1.4	1.7	2.2	2.3	1.2
15	5.3	5.7	9.7	7.0	6.1	5.7	6.6	3.3	2.4	1.4	2.7	2.0
16	5.0	5.4	10	7.5	5.9	5.7	6.0	4.4	1.5	1.7	3.1	3.2
17	4.7	5.4	7.8	6.6	4.1	5.5	5.1	3.9	1.3	1.5	2.6	4.1
18	5.0	5.4	8.8	6.3	5.4	5.5	4.7	3.9	2.6	.94	2.4	10
19	4.9	4.9	9.8	7.0	2.8	5.4	4.6	2.9	2.6	1.3	2.2	10
20	7.2	5.9	8.6	6.9	3.0	5.3	4.3	2.6	2.6	2.2	1.3	6.6
21	12	3.3	4.3	3.3	5.7	5.2	4.5	1.9	1.3	2.6	1.1	3.5
22	9.2	4.5	3.8	9.3	6.7	5.2	3.7	.68	1.7	5.6	1.5	4.0
23	7.4	26	8.5	24	8.9	7.5	2.8	.83	3.4	5.0	3.4	5.9
24	5.7	25	8.5	20	8.9	8.3	2.6	.83	5.8	3.8	2.8	18
25	5.6	16	3.8	15	8.1	7.2	2.9	1.0	3.8	2.9	2.2	74
26	6.1	13	5.4	12	7.7	6.3	3.1	1.2	3.1	1.9	1.8	41
27	2.5	9.7	8.8	11	6.9	5.5	4.6	.99	2.7	2.2	3.0	24
28	5.0	7.1	8.3	10	7.2	5.3	4.6	1.1	2.5	2.2	2.2	31
29	5.8	11	7.0	9.3	---	5.8	2.4	1.3	2.4	2.6	1.3	68
30	5.6	9.5	6.2	8.8	---	6.7	4.9	1.3	2.4	1.9	1.1	55
31	5.6	---	7.0	8.0	---	6.7	---	1.4	---	1.1	.63	---
TOTAL	267.1	247.8	239.2	266.6	172.9	203.2	146.6	100.53	59.16	72.54	65.83	401.92
MEAN	8.62	8.26	7.72	8.60	6.17	6.55	4.89	3.24	1.97	2.34	2.12	13.4
MAX	29	26	11	24	8.9	10	7.8	8.5	5.8	5.6	3.4	74
MIN	2.5	3.3	3.8	3.3	2.8	5.2	2.4	.68	.31	.94	.63	.51
CFSM	.63	.61	.57	.63	.45	.48	.36	.24	.14	.17	.16	.99
IN.	.73	.68	.65	.73	.47	.56	.40	.27	.16	.20	.18	1.10

CAL YR 1988 TOTAL 3008.79 MEAN 8.22 MAX 66 MIN .43 CFSM .60 IN. 8.23
WTR YR 1989 TOTAL 2243.38 MEAN 6.15 MAX 74 MIN .31 CFSM .45 IN. 6.14

ST. JOHNS RIVER BASIN BELOW OKLAWAHA RIVER

02246300 ORTEGA RIVER AT JACKSONVILLE, FL

LOCATION.--Lat 30°14'50", long 81°47'49", in NW¼ sec.15, T.3 S., R.25 E., Duval County, Hydrologic Unit 03080103, near center of span on downstream side of bridge on 103rd Street in Jacksonville, 15 mi upstream from mouth.

DRAINAGE AREA.--30.9 mi^2.

PERIOD OF RECORD.--Water years 1928, 1956, 1958-60, occasional low-flow measurements; January 1965 to July 1983, July 1984 to current year. Prior to October 1971, published as "near Jacksonville".

REVISED RECORDS.--WDR FL-75-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 0.02 ft above National Geodetic Vertical Datum of 1929. Prior to Jan. 21, 1965, nonrecording gage at same site and datum.

REMARKS.--Records fair.

AVERAGE DISCHARGE.--23 years (water years 1966-83, 1985-89), 35.8 ft^3/s, 15.73 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,950 ft^3/s, Aug. 30, 1968, gage height, 39.32 ft; no flow June 8-11, 1985; minimum gage height, 28.83 ft, June 5, 1965.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 400 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Sept. 25	0045	895	37.15	Sept. 29	0730	*1830	*38.40

Minimum discharge, 0.16 ft^3/s, Nov. 3; minimum gage height, 28.93 ft, June 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989 MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.4	.58	15	6.8	6.3	10	5.3	14	.95	21	16	18
2	9.1	.42	13	6.8	6.6	29	4.5	19	.84	15	39	46
3	22	.23	11	6.6	6.6	38	4.1	12	.71	13	50	45
4	56	.75	9.6	6.5	6.4	37	7.0	7.9	1.1	14	44	84
5	49	23	8.4	5.2	5.1	63	18	4.6	4.2	13	24	139
6	33	14	7.5	4.7	4.7	70	20	2.7	2.5	9.7	14	120
7	23	5.5	7.1	4.4	4.4	40	13	2.1	4.1	8.5	10	153
8	16	2.4	7.2	4.2	4.3	30	11	1.7	4.9	15	7.6	190
9	11	2.0	7.5	3.7	4.5	24	11	1.6	7.1	25	10	164
10	8.7	1.5	7.4	3.5	4.3	21	9.7	18	6.1	51	20	128
11	6.3	1.3	13	3.7	4.2	18	13	35	4.3	40	24	88
12	4.0	1.4	30	3.4	3.4	15	21	22	2.5	22	16	49
13	2.5	1.5	33	3.9	3.0	13	17	13	1.7	12	13	32
14	2.0	1.5	26	3.6	2.9	12	13	12	1.3	7.8	22	100
15	1.6	1.9	20	3.6	2.8	10	18	9.4	1.0	5.9	27	199
16	1.5	3.9	14	3.3	2.7	9.2	30	7.2	.95	5.1	24	143
17	1.3	2.6	13	2.8	2.5	8.2	25	4.3	1.5	11	16	295
18	1.2	2.2	11	2.7	2.7	7.2	17	3.1	2.9	19	11	241
19	1.2	1.9	10	4.4	2.7	6.6	12	2.8	15	17	8.1	192
20	1.1	1.4	9.7	2.9	3.0	5.9	10	2.9	25	17	7.2	141
21	1.2	1.2	9.3	3.4	3.9	8.0	10	3.6	18	33	6.8	105
22	.98	7.3	8.7	16	25	10	8.6	6.4	22	87	7.8	73
23	.81	35	8.1	21	26	20	7.0	6.8	26	59	8.3	49
24	.74	34	7.9	17	16	23	5.4	4.7	25	38	8.9	286
25	.65	23	7.6	13	12	15	4.3	2.7	26	26	22	696
26	.52	17	7.2	11	9.5	11	3.4	2.2	16	18	101	444
27	.47	13	7.1	9.4	8.5	9.2	3.0	1.9	10	13	109	293
28	.48	17	7.0	7.9	7.5	7.6	2.7	1.4	6.7	9.1	70	907
29	.43	23	6.9	7.4	---	6.5	2.4	1.2	5.4	6.4	49	1430
30	.43	18	6.8	7.1	---	6.1	4.9	1.1	14	5.0	34	851
31	.59	---	6.8	7.9	---	6.5	---	1.0	---	4.8	22	---
TOTAL	264.20	258.48	356.8	207.8	191.5	590.0	331.3	228.3	257.75	641.3	841.7	7701
MEAN	8.52	8.62	11.5	6.70	6.84	19.0	11.0	7.36	8.59	20.7	27.2	257
MAX	56	35	33	21	26	70	30	35	26	87	109	1430
MIN	.43	.23	6.8	2.7	2.5	5.9	2.4	1.0	.71	4.8	6.8	18
CFSM	.28	.28	.37	.22	.22	.62	.36	.24	.28	.67	.88	8.31
IN.	.32	.31	.43	.25	.23	.71	.40	.27	.31	.77	1.01	9.27

CAL YR 1988 TOTAL 11034.88 MEAN 30.1 MAX 1230 MIN .23 CFSM .98 IN. 13.28
WTR YR 1989 TOTAL 11870.13 MEAN 32.5 MAX 1430 MIN .23 CFSM 1.05 IN. 14.29

ST. JOHNS RIVER BASIN BELOW OKLAWAHA RIVER

02246828 PABLO CREEK AT JACKSONVILLE, FL

LOCATION.--Lat 30°14'07", long 81°28'42", in land grant 39, T.3 S., R.28 E., Duval County, Hydrologic Unit 03080103, near right bank on upstream side of culvert pipes on private road, 0.5 mi upstream from Cedar Swamp Creek, 4.8 mi upstream from mouth, and 12.5 mi southeast of Main Street Bridge in Jacksonville.

DRAINAGE AREA.--25.8 mi^2.

PERIOD OF RECORD.--March 1974 to current year.

REVISED RECORDS.--WDR FL-75-1: 1974.

GAGE.--Water-stage recorder. Datum of gage is 0.14 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Dec. 9 to Feb. 8. Records good except for estimated daily discharges, which are fair.

AVERAGE DISCHARGE.--15 years, 31.3 ft^3/s, 16.47 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,250 ft^3/s, Sept. 25, 1989, gage height, 8.26 ft; minimum, 1.6 ft^3/s, July 15, 1981; minimum gage height, 2.80 ft, June 15, 1989.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 350 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Sept. 25	0315	*1,250	*8.26	Sept. 29	1130	422	7.04

Minimum discharge, 3.9 ft^3/s, June 15, gage height, 2.80 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989 MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	47	11	20	11	20	14	11	11	4.8	7.0	9.8	7.2
2	60	10	18	12	19	23	9.7	13	4.7	9.4	9.4	7.8
3	54	9.7	17	12	18	24	9.2	10	4.6	8.4	11	7.6
4	55	18	16	12	17	23	9.5	8.7	4.4	7.2	11	38
5	53	24	16	11	16	20	10	7.7	4.4	7.0	9.8	204
6	42	29	15	11	17	18	10	7.1	4.5	6.7	8.6	216
7	33	25	15	11	18	17	9.2	6.5	4.6	9.2	7.7	121
8	27	20	15	11	19	16	8.5	6.0	4.8	10	7.0	78
9	24	17	15	11	16	15	8.6	5.8	5.3	9.0	6.9	57
10	22	15	15	11	15	16	8.7	8.3	5.1	7.5	7.2	43
11	20	13	16	11	13	15	9.6	13	4.9	7.1	7.2	36
12	20	13	24	11	13	13	10	11	4.7	6.7	6.9	34
13	18	13	29	11	12	13	9.4	9.2	4.5	8.2	6.8	31
14	17	12	24	11	12	12	8.9	8.0	4.2	7.4	7.5	58
15	15	12	20	11	11	11	8.9	7.2	4.2	6.9	9.7	93
16	14	12	17	10	12	11	11	6.6	5.4	6.4	9.2	69
17	13	11	15	11	11	11	9.8	6.2	5.7	5.9	8.2	70
18	13	11	15	10	11	10	9.0	5.9	5.7	7.3	7.3	111
19	12	11	14	10	11	10	8.3	5.7	5.6	8.3	7.1	121
20	14	11	12	12	11	10	7.8	5.6	5.4	7.7	7.7	87
21	20	11	12	15	11	9.9	7.7	6.0	5.4	9.4	7.7	64
22	16	12	12	25	20	9.5	7.6	8.0	5.1	40	7.6	50
23	14	37	12	60	20	11	7.2	6.9	11	52	7.6	46
24	13	47	12	45	18	13	6.9	6.4	14	52	7.2	286
25	13	42	12	32	16	12	6.7	6.1	12	41	7.6	452
26	12	33	12	28	14	11	6.5	5.8	9.9	28	8.8	219
27	11	26	12	26	14	11	6.3	5.5	8.0	20	8.9	168
28	11	24	12	25	13	10	6.1	5.6	6.9	16	8.1	186
29	10	22	12	24	---	11	6.0	5.7	6.3	12	7.4	364
30	10	20	11	23	---	11	6.9	5.3	6.3	12	7.0	279
31	11	---	11	20	---	13	---	5.0	---	11	6.5	---
TOTAL	714	571.7	478	544	418	424.4	256.0	228.8	182.4	446.7	250.4	3603.6
MEAN	23.0	19.1	15.4	17.5	14.9	13.7	8.53	7.38	6.08	14.4	8.08	120
MAX	60	47	29	60	20	24	11	13	14	52	11	452
MIN	10	9.7	11	10	11	9.5	6.0	5.0	4.2	5.9	6.5	7.2
CFSM	.89	.74	.60	.68	.58	.53	.33	.29	.24	.56	.31	4.66
IN.	1.03	.82	.69	.78	.60	.61	.37	.33	.26	.64	.36	5.20

CAL YR 1988 TOTAL 6736.3 MEAN 18.4 MAX 162 MIN 3.1 CFSM .71 IN. 9.71
WTR YR 1989 TOTAL 8118.0 MEAN 22.2 MAX 452 MIN 4.2 CFSM .86 IN. 11.71

ST. JOHNS RIVER BASIN BELOW OKLAWAHA RIVER

02246832 CEDAR SWAMP CREEK AT JACKSONVILLE, FL

LOCATION.--Lat 30°14'38", long 81°28'26", in NE¼ sec.15, T.3 S., R.28 E., Duval County, Hydrologic Unit 03080103, on left bank 10 ft upstream from culverts on private road, 0.4 mi upstream from mouth, and 12.4 mi southeast of Main Street Bridge in Jacksonville.

DRAINAGE AREA.--3.40 mi^2.

PERIOD OF RECORD.--March 1974 to current year.

GAGE.--Water-stage recorder. Datum of gage is 2.36 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair.

AVERAGE DISCHARGE.--15 years, 7.78 ft^3/s, 31.04 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 437 ft^3/s, Sept. 24, 1989, gage height, 6.73 ft; minimum, 0.14 ft^3/s, Sept. 14,15,16, 1981; minimum gage height, 0.68 ft, part of each day, July 21-25, 1985.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 150 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Sept. 24	0800	*437	*6.73	Sept. 29	0800	356	6.28

Minimum discharge, 0.46 ft^3/s, June 14,15, gage height, 1.35 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.0	1.9	4.3	2.9	3.9	3.2	2.5	2.5	.91	6.8	5.7	2.3
2	6.4	1.9	3.9	2.9	3.8	5.2	2.1	2.8	.77	3.5	7.5	2.3
3	7.3	1.9	3.7	2.8	3.7	5.2	2.0	2.0	.67	2.4	7.6	2.0
4	13	4.4	3.6	2.7	3.6	4.3	1.9	1.5	.62	3.1	5.8	24
5	7.7	6.8	3.5	2.6	3.5	4.0	2.1	1.1	.57	16	4.6	206
6	5.8	4.6	3.3	2.6	3.4	3.7	2.1	.85	.60	8.2	4.3	126
7	5.0	3.3	3.2	2.6	3.6	3.5	2.0	.94	.84	9.0	4.1	66
8	4.4	2.9	3.2	2.6	3.8	3.3	1.8	.93	.84	6.2	3.5	31
9	4.0	2.7	3.2	2.6	3.3	3.3	1.7	.78	1.3	4.3	3.1	18
10	3.9	2.6	3.1	2.5	3.1	3.2	1.6	1.9	1.3	3.7	3.2	13
11	3.7	2.5	4.2	2.5	3.3	3.0	1.8	3.5	.88	3.3	3.2	12
12	3.4	2.5	7.6	2.5	3.0	3.0	2.4	2.2	.84	2.8	3.0	11
13	3.2	2.4	6.1	2.5	2.9	2.8	2.0	1.5	.63	7.6	3.0	9.3
14	3.0	2.5	5.1	2.5	3.6	2.6	1.8	1.3	.49	6.1	3.4	24
15	2.9	2.4	4.6	2.6	4.7	2.5	1.9	1.2	.48	4.6	4.5	41
16	2.8	2.3	4.3	2.6	4.4	2.5	2.6	1.1	.98	3.7	3.8	21
17	2.7	2.3	4.0	2.4	3.1	2.5	2.2	1.0	2.1	3.3	3.0	37
18	2.6	2.3	3.8	2.4	3.6	2.4	1.7	.91	1.2	3.2	2.7	29
19	2.5	2.3	3.7	2.5	3.6	2.3	1.5	.84	.85	3.5	2.7	30
20	2.6	2.3	3.5	2.5	3.7	2.3	1.5	.79	.70	3.0	3.2	18
21	2.7	2.2	3.5	2.4	5.2	2.2	1.4	1.0	.64	8.2	3.1	12
22	2.4	4.3	3.4	10	7.5	2.1	1.4	4.2	.62	71	2.9	11
23	2.2	17	3.3	20	7.6	3.7	1.3	3.0	2.5	75	2.7	14
24	2.2	9.7	3.3	9.1	6.4	3.4	1.2	2.2	5.9	42	2.7	185
25	2.1	6.6	3.2	6.6	3.6	2.7	1.1	1.7	3.0	16	4.0	293
26	2.0	5.7	3.1	5.7	3.3	2.4	1.1	1.5	1.8	11	3.8	149
27	2.0	5.2	3.0	5.3	3.1	2.3	.99	1.2	1.4	8.7	3.0	188
28	2.0	5.1	3.0	4.8	2.9	2.4	.94	1.2	1.2	7.6	2.6	246
29	1.9	4.7	2.9	4.5	---	2.2	.89	1.5	1.2	6.7	2.3	285
30	1.9	4.4	2.9	4.4	---	2.2	1.2	1.3	2.4	7.1	2.1	151
31	1.9	---	2.9	4.2	---	2.8	---	1.1	---	5.4	2.1	---
TOTAL	115.2	121.7	116.4	128.8	111.2	93.2	50.72	49.54	38.23	363.0	113.2	2256.9
MEAN	3.72	4.06	3.75	4.15	3.97	3.01	1.69	1.60	1.27	11.7	3.65	75.2
MAX	13	17	7.6	20	7.6	5.2	2.6	4.2	5.9	75	7.6	293
MIN	1.9	1.9	2.9	2.4	2.9	2.1	.89	.78	.48	2.4	2.1	2.0
CFSM	1.09	1.19	1.10	1.22	1.17	.88	.50	.47	.37	3.44	1.07	22.1
IN.	1.26	1.33	1.27	1.41	1.22	1.02	.55	.54	.42	3.97	1.24	24.69

CAL YR 1988 TOTAL 1636.26 MEAN 4.47 MAX 90 MIN .46 CFSM 1.31 IN. 17.90
WTR YR 1989 TOTAL 3558.09 MEAN 9.75 MAX 293 MIN .48 CFSM 2.87 IN. 38.93

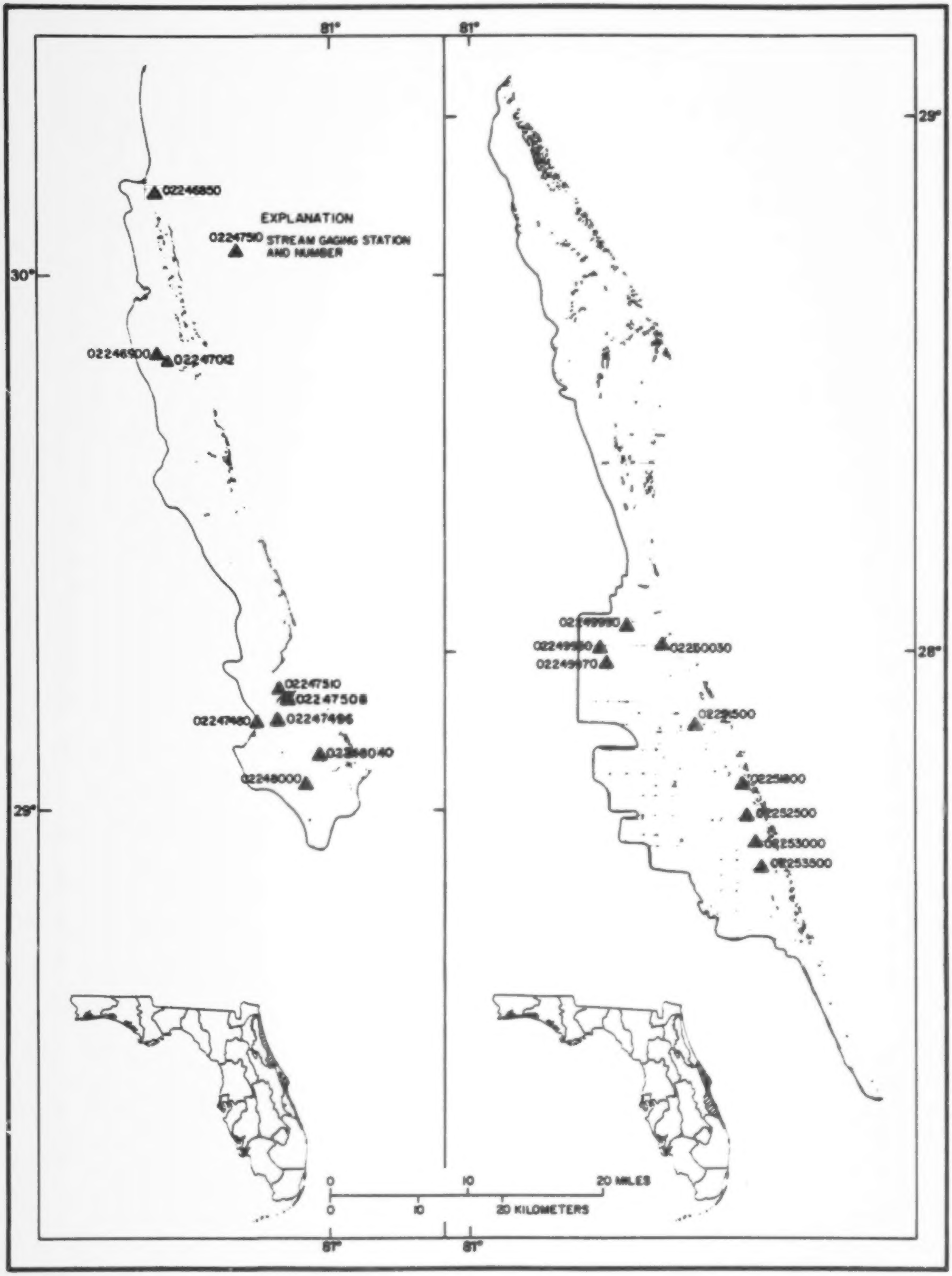

81°
81°
29°
30°
02246850
EXPLANATION
02247510
STREAM GAGING STATION AND NUMBER
02246900
02247012
02247510
02247508
02247480
02247496
02248040
02248000
29°
02249990
02249930
02250030
02249970
28°
02251500
02251800
02252500
02253000
02253500
0
10
20 MILES
0
10
20 KILOMETERS
81°
81°

Figure 19.--Location of stream gaging stations in the coastal area between the St. Johns and St. Lucie Rivers.

ST. JOHNS RIVER

COASTAL AREA BETWEEN ST. JOHNS RIVER AND PONCE DE LEON INLET

02246850 DIEGO PLAINS SWAMP DRAIN AT MICKLER LANDING, FL

LOCATION.--Lat 30°09'39", long 81°21'37", in NW¼ sec.14, T.4 S., R.29 E., St. Johns County, Hydrologic Unit 03080201, on right bank 10 ft upstream from box culverts, at intersection of State Highway 203 and Mickler Landing Road, 0.2 mi west of Mickler Landing, 2.0 mi southeast of Palm Valley, and 4.5 mi south of Ponte Vedra Beach.

DRAINAGE AREA.--4.95 mi^2.

PERIOD OF RECORD.--August 1984 to current year.

GAGE.--Water-stage recorder. Datum of gage is 2.00 ft below National Geodetic Vertical Datum of 1929.

REMARKS.--Records poor.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 149 ft^3/s, Sept. 20, 1984, gage height, 6.55 ft; maximum gage height, 6.67 ft, Sept. 2, 1985; no flow for many days each year; minimum gage height, 3.48 ft, Aug. 13, 1988.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 69 ft^3/s, Sept. 7; maximum gage height, 6.13 ft, Sept. 19,20,29; no flow Apr. 29, June 3; minimum gage height, 4.52 ft, June 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.9	5.7	10	5.2	8.0	3.5	2.5	1.2	.37	.85	6.2	4.9
2	11	5.7	9.3	5.0	7.8	4.0	2.3	1.9	.07	1.6	6.0	4.9
3	11	6.0	8.7	4.9	7.4	4.3	2.1	2.1	.00	1.9	5.6	4.9
4	11	7.0	8.2	4.7	7.2	4.7	2.0	2.3	.01	2.4	5.2	13
5	11	8.2	7.6	4.5	7.0	5.0	2.0	2.2	.56	3.0	4.9	41
6	10	9.0	7.1	4.3	6.7	5.0	2.0	2.0	1.6	3.4	4.6	64
7	9.2	9.0	6.9	4.2	6.4	4.9	1.9	1.6	2.0	3.7	4.2	69
8	8.6	8.7	6.5	4.1	6.2	4.7	1.8	1.3	2.3	3.7	3.8	65
9	8.1	8.2	6.4	4.1	5.8	4.5	1.6	.97	2.6	3.5	3.6	57
10	7.9	7.9	6.1	3.9	5.4	4.2	1.5	1.0	2.6	3.3	3.5	49
11	7.6	7.5	6.2	3.7	5.2	4.0	1.6	1.5	2.4	3.0	3.5	41
12	7.6	7.3	6.7	3.6	4.8	3.8	1.7	1.5	2.1	2.7	3.5	53
13	7.1	7.0	7.0	3.6	4.6	3.7	1.5	1.4	1.8	2.5	3.6	60
14	6.6	6.8	7.1	3.8	4.4	3.7	1.4	1.4	1.5	2.3	4.0	57
15	6.1	6.4	7.2	3.8	4.3	3.6	1.5	1.2	1.3	2.3	4.7	48
16	5.7	6.1	7.0	3.8	4.2	3.5	1.5	.97	1.6	2.4	5.4	45
17	5.4	6.0	7.0	3.8	4.0	3.3	1.5	.75	1.7	2.5	5.8	54
18	5.1	5.8	6.7	3.7	3.7	3.2	1.4	.49	1.5	2.8	6.0	60
19	5.0	5.6	6.4	3.5	3.5	3.0	1.3	.29	1.2	3.0	6.1	64
20	5.2	5.5	6.3	3.4	3.3	2.9	1.3	.07	.96	3.3	6.2	62
21	6.8	5.4	6.1	3.3	3.3	2.8	1.1	.25	.90	3.7	6.4	55
22	7.9	5.7	6.0	5.4	4.1	2.8	.94	1.3	.82	4.6	6.4	48
23	8.2	8.7	5.9	8.6	4.2	3.1	.82	1.6	.76	5.8	6.3	42
24	8.0	10	5.8	9.6	4.1	3.3	.65	2.0	.95	6.6	6.1	39
25	7.6	11	5.7	9.7	4.0	3.1	.54	2.3	.84	7.0	5.8	40
26	7.1	11	5.7	9.4	3.8	3.0	.44	2.4	.72	6.2	5.4	41
27	6.7	11	5.5	9.3	3.7	2.8	.30	2.2	.59	5.5	5.2	39
28	6.4	11	5.5	9.1	3.5	2.7	.14	1.9	.44	4.9	5.4	42
29	6.1	11	5.4	8.9	---	2.5	.00	1.5	.41	4.9	5.4	55
30	5.8	11	5.3	8.6	---	2.5	.45	1.2	.52	5.8	5.1	50
31	5.6	---	5.2	8.3	---	2.7	---	.79	---	6.2	5.0	---
TOTAL	235.3	235.2	206.5	171.8	140.6	110.8	39.78	43.58	35.12	115.35	158.9	1367.7
MEAN	7.59	7.84	6.66	5.54	5.02	3.57	1.33	1.41	1.17	3.72	5.13	45.6
MAX	11	11	10	9.7	8.0	5.0	2.5	2.4	2.6	7.0	6.4	69
MIN	5.0	5.4	5.2	3.3	3.3	2.5	.00	.07	.00	.85	3.5	4.9

CAL YR 1988 TOTAL 3183.16 MEAN 8.70 MAX 31 MIN .00
WTR YR 1989 TOTAL 2860.63 MEAN 7.84 MAX 69 MIN .00

COASTAL AREA BETWEEN ST. JOHNS RIVER AND PONCE DE LEON INLET

02246900 MOULTRIE CREEK AT STATE HIGHWAY 207, NEAR ST. AUGUSTINE, FL

LOCATION.--Lat 29°50'50", long 81°21'39", in SE¼ sec.34, T.7 S., R.29 E., St. Johns County, Hydrologic Unit 03080201, at center on downstream side of box culverts on State Highway 207, 2.0 mi upstream from Fort Peyton Branch, 4.2 mi southwest of St. Augustine, and 6.3 mi upstream from mouth.

DRAINAGE AREA.--19.8 mi^2.

PERIOD OF RECORD.--October 1961 to current year.

REVISED RECORDS.--WDR FL-77-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 14.24 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair.

AVERAGE DISCHARGE.--28 years, 17.4 ft^3/s, 11.93 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 860 ft^3/s, Sept. 21, 1969, gage height, 9.16 ft; no flow for many days in some years; minimum gage height, 1.84 ft, July 15, 1981.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 250 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 23	1400	*181	*6.79				

Minimum daily discharge, 0.03 ft^3/s, June 4,11,14-16,20, Aug. 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23	3.9	31	8.5	16	5.2	2.2	.46	.04	.13	.11	.26
2	17	3.7	27	8.2	15	9.2	1.7	.70	.04	.28	.14	.24
3	16	3.3	23	7.9	14	9.4	1.4	.40	.04	.18	.25	.22
4	15	3.5	21	7.5	13	12	1.3	.28	.03	.33	.27	.48
5	13	6.3	19	7.1	12	14	1.1	.22	.04	.48	.19	.56
6	9.3	8.5	17	6.9	11	12	1.0	.15	.07	.27	.10	.44
7	7.5	7.2	16	6.7	11	11	1.0	.11	.06	.27	.04	.54
8	6.7	6.1	14	6.5	9.9	9.9	.91	.08	.05	.22	.03	.45
9	5.9	5.4	14	6.3	9.4	9.2	.98	.10	.05	.13	.05	.41
10	5.3	4.9	13	6.2	8.6	8.2	.88	.51	.04	.09	.11	.38
11	4.9	4.5	15	6.1	8.1	7.8	.93	.92	.03	.10	.36	.37
12	4.5	4.2	25	6.0	7.6	7.0	1.0	.48	.04	.13	.38	.35
13	4.0	4.0	31	5.9	7.2	6.5	.65	.37	.04	.44	.50	.33
14	3.6	3.9	28	6.0	7.6	6.1	.46	.31	.03	.30	1.5	.40
15	3.3	3.7	24	5.9	6.6	6.1	.49	.21	.03	.24	1.1	.44
16	4.9	3.5	22	5.7	7.6	5.3	.51	.12	.03	.21	.66	.42
17	4.0	4.0	21	5.4	7.2	4.7	.43	.07	.04	.18	.54	.82
18	3.2	3.8	18	5.2	5.8	4.0	.35	.06	.04	.14	.62	1.1
19	2.9	3.6	16	6.1	5.4	3.7	.26	.05	.04	.12	.52	.64
20	4.7	3.4	15	5.0	5.3	3.4	.20	.04	.03	.14	.96	.55
21	9.1	3.4	14	5.4	6.0	2.9	.22	.75	.05	.18	.81	.52
22	8.1	10	13	31	8.1	2.7	.29	1.4	.06	.36	.60	.54
23	6.6	128	13	89	7.3	4.5	.26	.62	.18	.57	.52	.83
24	5.7	106	12	64	6.5	8.7	.21	.40	.47	.54	.48	.75
25	5.4	74	11	52	5.9	6.6	.15	.28	.28	.54	.44	2.8
26	5.0	59	11	44	5.3	5.4	.11	.17	.14	.58	.44	3.6
27	4.8	48	10	36	5.2	4.5	.08	.09	.09	.52	.42	2.7
28	4.4	45	9.8	30	4.9	3.6	.07	.06	.06	.48	.36	5.1
29	4.0	42	9.4	23	---	3.0	.06	.05	.06	.39	.33	8.6
30	3.7	35	9.1	20	---	2.6	.14	.05	.08	.30	.30	4.9
31	3.9	---	8.8	18	---	2.7	---	.05	---	.20	.28	---
TOTAL	219.4	641.8	531.1	541.5	237.5	201.9	19.34	9.56	2.28	9.04	13.41	39.74
MEAN	7.08	21.4	17.1	17.5	8.48	6.51	.64	.31	.076	.29	.43	1.32
MAX	23	128	31	89	16	14	2.2	1.4	.47	.58	1.5	8.6
MIN	2.9	3.3	8.8	5.0	4.9	2.6	.06	.04	.03	.09	.03	.22
CFSM	.36	1.08	.87	.88	.43	.33	.03	.02	.00	.01	.02	.07
IN.	.41	1.21	1.00	1.02	.45	.38	.04	.02	.00	.02	.03	.07

CAL YR 1988 TOTAL 2347.40 MEAN 6.41 MAX 128 MIN .00 CFSM .32 IN. 4.41
WTR YR 1989 TOTAL 2466.57 MEAN 6.76 MAX 128 MIN .03 CFSM .34 IN. 4.63

COASTAL AREA BETWEEN ST. JOHNS RIVER AND PONCE DE LEON INLET

02247012 MOULTRIE CREEK TRIBUTARY NEAR ST. AUGUSTINE, FL

LOCATION.--Lat 29°51'44", long 81°21'43", in land grant 48, T.7 S., R.29 E., St. Johns County, Hydrologic Unit 03080201, at center on upstream side of box culverts on State Highway 207, 3.2 mi northeast of intersection of Interstate Route 95 and State Highway 207, 2.9 mi southwest of St. Augustine, and 3.1 mi upstream from mouth.

DRAINAGE AREA.--1.7 mi^2.

PERIOD OF RECORD.--March 1988 to current year.

GAGE --Water-stage recorder. Datum of gage is at National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records poor.

EXTREMES FOR CURRENT PERIOD.--

March to September 1988: Maximum discharge during period, 34.0 ft^3/s, Sept. 8, gage height, 31.53 ft; no flow for many days; minimum gage height 28.66 ft, Aug. 19-25.

Water year 1989: Maximum discharge, 64.0 ft^3/s, Nov. 23, gage height, 32.24 ft; no flow for many days; minimum gage height, 29.00 ft, Sept. 18.

DISCHARGE, IN CUBIC FEET PER SECOND, PERIOD MARCH 1988 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	2.5	4.3	2.8	1.9	.00	.00
2	---	---	---	---	---	---	2.6	2.7	2.3	1.4	.00	.00
3	---	---	---	---	---	---	3.7	3.5	3.7	.92	.00	.00
4	---	---	---	---	---	---	3.5	5.0	.92	.80	.00	.00
5	---	---	---	---	---	---	3.8	4.7	.54	1.2	.00	.00
6	---	---	---	---	---	---	2.6	3.2	.92	.87	.00	.00
7	---	---	---	---	---	---	1.8	2.8	1.8	1.0	.07	1.4
8	---	---	---	---	---	---	1.4	2.7	.44	.20	.00	12
9	---	---	---	---	---	---	2.8	1.5	.25	.00	.00	11
10	---	---	---	---	---	---	2.3	2.9	.16	.00	.00	1.7
11	---	---	---	---	---	---	.97	3.7	.20	.03	.00	1.2
12	---	---	---	---	---	---	1.1	3.2	.07	.36	.00	.99
13	---	---	---	---	---	---	1.7	3.4	.00	.17	.00	.80
14	---	---	---	---	---	---	3.0	3.8	.00	.01	.00	.67
15	---	---	---	---	---	---	1.7	2.1	.00	.00	.00	.30
16	---	---	---	---	---	---	2.9	3.3	.00	.00	.00	.21
17	---	---	---	---	---	---	1.4	3.4	.00	.00	.00	.17
18	---	---	---	---	---	---	.52	3.0	.68	.00	.00	.19
19	---	---	---	---	---	---	1.0	2.5	.43	.00	.00	.22
20	---	---	---	---	---	---	2.7	2.1	.13	.00	.00	.18
21	---	---	---	---	---	---	2.4	1.3	.00	.00	.00	.29
22	---	---	---	---	---	---	1.2	.39	.00	.00	.00	.63
23	---	---	---	---	---	2.6	1.2	1.4	.19	.00	.00	.67
24	---	---	---	---	---	2.7	2.4	3.1	.20	.00	.00	.69
25	---	---	---	---	---	2.2	3.0	4.7	.70	.00	.00	.38
26	---	---	---	---	---	1.7	4.0	3.9	1.2	.00	.00	.27
27	---	---	---	---	---	2.3	4.2	3.8	1.6	.00	.00	.52
28	---	---	---	---	---	2.3	3.6	3.9	1.7	.00	.00	.65
29	---	---	---	---	---	2.9	3.2	2.1	1.4	.00	.00	.44
30	---	---	---	---	---	2.8	2.9	1.1	.55	.00	.00	.41
31	---	---	---	---	---	2.6	---	1.8	---	.00	.00	---
TOTAL	---	---	---	---	---	---	72.09	91.29	22.88	8.86	0.07	35.98
MEAN	---	---	---	---	---	---	2.40	2.94	.76	.29	.002	1.20
MAX	---	---	---	---	---	---	4.2	5.0	3.7	1.9	.07	12
MIN	---	---	---	---	---	---	.52	.39	.00	.00	.00	.00
AC-FT	---	---	---	---	---	---	143	181	45	18	.1	71
CFSM	---	---	---	---	---	---	1.41	1.72	.45	.17	.00	.70
IN.	---	---	---	---	---	---	1.57	1.99	.50	.19	.00	.78

COASTAL AREA BETWEEN ST. JOHNS RIVER AND PONCE DE LEON INLET

02247012 MOULTRIE CREEK TRIBUTARY, NEAR ST. AUGUSTINE, FL

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.28	.00	.78	.57	2.0	1.2	1.1	.47	.65	.00	.58	.00
2	.20	.03	1.5	.57	2.4	1.6	.81	1.0	.59	.00	.67	.00
3	.20	.40	1.6	.57	2.3	1.4	.90	1.1	.50	.00	.69	.00
4	.27	.68	1.6	.57	1.4	1.4	1.1	1.1	.50	.04	.65	.00
5	.71	1.4	1.6	.50	1.1	1.6	1.1	.97	.65	.12	.57	.00
6	.36	.81	1.5	.41	1.1	1.4	1.1	.84	.91	.39	.11	.00
7	.24	.32	1.1	.48	1.1	1.2	1.1	.84	1.3	1.4	.00	.00
8	.19	.21	.55	.63	.84	2.2	1.2	.76	.79	.81	.00	.00
9	.17	.17	.41	.65	.95	2.5	1.1	.83	1.3	.65	.00	.00
10	.15	.15	.37	.44	1.1	1.7	1.0	1.1	1.6	.62	1.2	.00
11	.14	.20	.62	.30	1.1	1.2	1.1	1.2	1.5	1.2	1.4	.00
12	.12	.19	1.9	.49	1.1	1.1	1.2	.58	1.1	1.4	.73	.00
13	.08	.15	2.5	.73	1.1	1.1	1.2	.20	.82	1.4	.71	.00
14	.01	.14	1.2	.61	1.1	1.1	1.1	.10	.56	1.5	1.1	.00
15	.00	.11	.77	.49	1.1	1.1	1.2	.02	.42	1.4	1.1	.00
16	.00	.08	.65	.57	1.1	1.0	1.1	.00	.61	.85	.81	.00
17	.00	.11	.63	.57	1.1	.96	1.1	.18	.67	.54	.74	.00
18	.21	.20	.57	.69	1.1	.96	1.1	.62	.63	.11	.73	.00
19	.45	.17	.50	1.4	1.1	.86	1.1	.74	.38	.00	.21	.00
20	.78	.14	.88	.80	1.1	.76	1.1	.57	.05	.00	.53	.00
21	.96	.12	1.4	.74	1.7	.96	1.1	.27	.00	.00	.35	.00
22	.29	1.4	.82	6.9	2.6	.96	1.1	.28	.00	.00	.16	.00
23	.16	41	.57	11	2.3	1.4	1.1	.57	.00	.00	.01	.00
24	.12	11	.46	4.5	1.4	2.5	1.0	.79	.00	.00	.00	.00
25	.10	2.3	.46	3.1	1.2	2.4	.96	.83	.00	.00	.00	.16
26	.02	1.5	.46	2.0	1.2	2.3	.96	.40	.00	.00	.00	.38
27	.00	1.1	.46	2.5	1.2	2.3	.93	.40	.00	.12	.00	.24
28	.00	1.3	.56	2.2	1.1	2.2	.89	.47	.00	.55	.00	.57
29	.00	1.0	.57	1.6	---	2.0	.86	.13	.00	.58	.00	.70
30	.00	.80	.57	1.6	---	2.0	.83	.13	.00	.62	.00	.36
31	.00	---	.57	1.3	---	1.5	---	.54	---	.57	.00	---
TOTAL	6.21	67.18	28.13	49.48	37.99	46.86	31.54	18.03	15.53	14.87	13.05	2.41
MEAN	.20	2.24	.91	1.60	1.36	1.51	1.05	.58	.52	.48	.42	.080
MAX	.96	41	2.5	11	2.6	2.5	1.2	1.2	1.6	1.5	1.4	.70
MIN	.00	.00	.37	.30	.84	.76	.81	.00	.00	.00	.00	.00
AC-FT	12	133	56	98	75	93	63	36	31	29	26	4.8
CFSM	.12	1.31	.53	.93	.79	.88	.61	.34	.30	.28	.25	.05
IN.	.14	1.46	.61	1.08	.83	1.02	.69	.39	.34	.32	.28	.05

WTR YR 1989 TOTAL 331.28 MEAN .91 MAX 41 MIN .00 AC-FT 657 CFSM .53 IN. 7.21

COASTAL AREA BETWEEN ST. JOHNS RIVER AND PONCE DE LEON INLET

02247480 TIGER BAY CANAL NEAR DAYTONA BEACH, FL

LOCATION.--Lat 29°09'58", long 81°09'18", in SW¼ sec.25, T.15 S., R.31 E., Volusia County, Hydrologic Unit 03080201, at center on downstream side of bridge on Indian Lake Road, 2.4 mi north of its intersection with U.S. Highway 92, and 8 mi west of Daytona Beach.

DRAINAGE AREA.--29 mi^2, approximately.

PERIOD OF RECORD.--January 1978 to current year.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Nov. 30 to Dec. 13. Records poor. Since 1988 some ground-water diversion out of the basin for municipal water supply.

AVERAGE DISCHARGE.--11 years, 18.7 ft^3/s, 13,550 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 263 ft^3/s, Mar. 7, 1979, gage height, 32.94 ft; no flow for many days in several years; minimum gage height, 26.00 ft, July 16, 1981, estimated.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 43 ft^3/s, Jan. 25,26, gage height, 31.61 ft; no flow for many days; creek dry at gage many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.13	22	4.7	.00	.00	.00	.00	.00	.00
2	.00	.00	.00	.10	20	6.0	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	.07	19	6.8	.00	.00	.00	.00	.00	.00
4	.00	.00	.00	.03	17	8.0	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	.00	15	7.6	.00	.00	.00	.00	.00	.00
6	.00	.00	.00	.00	13	6.8	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	12	5.9	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	11	4.9	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	9.2	4.6	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	8.1	4.3	.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	6.7	3.8	.00	.00	.00	.00	.00	.00
12	.00	.00	.03	.00	5.7	3.3	.00	.00	.00	.00	.00	.00
13	.00	.00	.21	.00	4.9	2.9	.00	.00	.00	.00	.00	.00
14	.00	.00	.30	.00	4.4	2.4	.00	.00	.00	.00	.00	.00
15	.00	.00	.37	.00	3.9	2.0	.00	.00	.00	.00	.00	.00
16	.00	.00	.44	.00	3.3	1.7	.00	.00	.00	.00	.00	.00
17	.00	.00	.49	.00	2.9	1.3	.00	.00	.00	.00	.00	.00
18	.00	.00	.50	.00	2.5	.93	.00	.00	.00	.00	.00	.00
19	.00	.00	.49	.00	2.2	.70	.00	.00	.00	.00	.00	.00
20	.00	.00	.48	.00	2.0	.55	.00	.00	.00	.00	.00	.00
21	.00	.00	.46	.00	2.6	.40	.00	.00	.00	.00	.00	.00
22	.00	.00	.44	.60	5.6	.28	.00	.00	.00	.00	.00	.00
23	.00	.00	.48	9.6	8.4	.33	.00	.00	.00	.00	.00	.00
24	.00	.00	.44	33	9.6	.38	.00	.00	.00	.00	.00	.00
25	.00	.00	.38	43	8.9	.27	.00	.00	.00	.00	.00	.00
26	.00	.00	.33	41	7.4	.18	.00	.00	.00	.00	.00	.00
27	.00	.00	.29	37	6.0	.11	.00	.00	.00	.00	.00	.00
28	.00	.00	.24	33	4.8	.04	.00	.00	.00	.00	.00	.00
29	.00	.00	.20	30	---	.00	.00	.00	.00	.00	.00	.00
30	.00	.00	.17	27	---	.00	.00	.00	.00	.00	.00	.00
31	.00	---	.15	24	---	.00	---	.00	---	.00	.00	---
TOTAL	0.00	0.00	6.89	278.53	238.1	81.17	0.00	0.00	0.00	0.00	0.00	0.00
MEAN	.00	.00	.22	8.98	8.50	2.62	.00	.00	.00	.00	.00	.00
MAX	.00	.00	.50	43	22	8.0	.00	.00	.00	.00	.00	.00
MIN	.00	.00	.00	.00	2.0	.00	.00	.00	.00	.00	.00	.00
AC-FT	.0	.0	14	552	472	161	.0	.0	.0	.0	.0	.0

CAL YR 1988 TOTAL 1613.78 MEAN 4.41 MAX 62 MIN .00 AC-FT 3200
WTR YR 1989 TOTAL 604.69 MEAN 1.66 MAX 43 MIN .00 AC-FT 1200

ST. JOHNS RIVER

COASTAL AREA BETWEEN ST. JOHNS RIVER AND PONCE DE LEON INLET

02247496 THAYER CANAL NEAR DAYTONA BEACH, FL

LOCATION.--Lat 29°10'43", long 81°07'14", in NW¼ sec.29, T.15 S., R.31 E., Volusia County, Hydrologic Unit 03080201, on left bank 50 ft upstream from box culverts on 11th Street extension, 1.5 mi above mouth, and 2.2 mi northwest of the intersection of Interstate Highway 95 and U.S. Highway 92 near Daytona Beach.

DRAINAGE AREA.--33 mi^2, approximately.

PERIOD OF RECORD.--December 1982 to September 1988 (gage heights and discharge measurements only). October 1988 to September 1989. Records prior to October 1988 are unpublished and available in files of the Orlando Subdistrict office.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929. (Savage Engineering Co. bench mark).

REMARKS.--Estimated daily discharges: June 16 to Aug. 10. Records fair.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge measured, 72 ft^3/s, Dec. 21, 1983, gage height, 25.21 ft; maximum gage height, 25.59 ft, Mar. 30,31, 1984; no flow for many days most years; creek dry at gage for some days most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 11 ft^3/s, Feb. 1-4; maximum gage height, 23.76 ft, Feb. 2; no flow for many days; creek dry at gage for some days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	10	4.1	.16	.09	.00	.00	.00	.00
2	.00	.00	.00	.00	11	5.7	.13	.14	.00	.00	.00	.07
3	.01	.00	.00	.00	11	6.0	.10	.09	.00	.00	.00	.04
4	.00	.00	.00	.00	10	5.6	.09	.08	.00	.00	.00	.03
5	.00	.00	.00	.00	10	4.9	.09	.06	.00	.00	.00	.03
6	.00	.00	.00	.00	9.4	4.5	.08	.05	.00	.00	.00	.02
7	.00	.00	.00	.00	8.8	4.1	.06	.04	.00	.00	.00	.02
8	.00	.00	.00	.00	8.1	3.8	.05	.03	.00	.00	.00	.02
9	.00	.00	.00	.00	7.4	3.6	.04	.02	.00	.00	.00	.03
10	.00	.00	.00	.00	6.5	3.4	.03	.02	.00	.00	.00	.02
11	.00	.00	.00	.00	5.7	3.0	.03	.04	.00	.00	.00	.02
12	.00	.00	.00	.00	5.2	2.7	.02	.03	.00	.00	.00	.00
13	.00	.00	.00	.00	4.7	2.3	.02	.02	.00	.00	.02	.00
14	.00	.00	.00	.00	4.3	1.9	.01	.01	.00	.00	.02	.00
15	.00	.00	.00	.00	3.9	1.6	.01	.00	.00	.00	.01	.00
16	.00	.00	.00	.00	3.4	1.3	.01	.00	.00	.00	.01	.00
17	.00	.00	.00	.00	2.9	1.1	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	2.5	.94	.00	.00	.00	.00	.01	.00
19	.00	.00	.00	.00	2.1	.78	.00	.00	.00	.00	.05	.01
20	.00	.00	.00	.00	1.8	.67	.01	.00	.00	.00	.05	.00
21	.00	.00	.00	.00	2.2	.59	.03	.00	.00	.00	.05	.00
22	.00	.00	.00	.45	4.7	.48	.01	.00	.00	.00	.04	.02
23	.00	.11	.00	.32	5.0	.47	.00	.00	.00	.00	.03	.05
24	.00	.03	.00	.15	4.1	.52	.00	.00	.00	.00	.03	.04
25	.00	.02	.00	.11	3.5	.46	.00	.00	.00	.00	.03	.08
26	.00	.01	.00	.08	3.5	.41	.00	.00	.00	.00	.03	.27
27	.00	.00	.00	.07	3.9	.35	.00	.00	.00	.00	.02	.28
28	.00	.00	.00	.06	4.0	.29	.00	.00	.00	.00	.01	.67
29	.00	.00	.00	.05	---	.25	.00	.00	.00	.00	.00	.56
30	.00	.00	.00	3.2	---	.21	.01	.00	.00	.00	.00	.32
31	.00	---	.00	8.7	---	.20	---	.00	---	.00	.00	---
TOTAL	0.01	0.17	0.00	13.19	159.6	66.22	0.99	0.72	0.00	0.00	0.41	2.60
MEAN	.000	.006	.00	.43	5.70	2.14	.033	.023	.00	.00	.013	.087
MAX	.01	.11	.00	8.7	11	6.0	.16	.14	.00	.00	.05	.67
MIN	.00	.00	.00	.00	1.8	.20	.00	.00	.00	.00	.00	.00
AC-FT	.02	.3	.0	26	317	131	2.0	1.4	.0	.0	.8	5.2

WTR YR 1989 TOTAL 243.91 MEAN .67 MAX 11 MIN .00 AC-FT 484

COASTAL AREA BETWEEN ST. JOHNS RIVER AND PONCE DE LEON INLET

02247508 ELEVENTH STREET CANAL NEAR HOLLY HILL, FL

LOCATION.--Lat 29°13'04", long 81°06'32", in NW¼ sec.9, T.15 S., R.32 E., Volusia County, Hydrologic Unit 03080201, 700 ft upstream from mouth, 0.2 mi downstream from culvert at Interstate Highway 95 and 11th Street, and 4.3 mi west of intersection of U.S. Highway 1 and 11th Street, Holly Hill.

DRAINAGE AREA.--3.5 mi^2, approximately.

PERIOD OF RECORD.--December 1982 to September 1988 (gage heights and discharge measurements only), October 1988 to September 1989. Records prior to October 1988 are unpublished and available in files of the Orlando Subdistrict office.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (Florida Department of Transportation bench mark).

REMARKS.--Records fair. The basin is interconnected with surrounding basins by canals.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge measured, 83 ft^3/s, Jan. 10, 1986; maximum gage height, 13.74 ft, Sept. 10, 1984; minimum discharge measured, 0.11 ft^3/s, July 27, 1987; minimum gage height, 9.26 ft, Aug. 19-23, 1988.

EXTRMES FOR CURRENT YEAR.--Maximum discharge 53 ft^3/s, Jan. 22, gage height, 13.33 ft; minimum, 0.64 ft^3/s, part or all of each day July 30,31, Aug. 1,2,4-8, gage height 9.30 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.1	.77	3.5	2.2	4.1	3.4	2.4	4.0	1.2	1.1	.66	2.1
2	.93	.77	3.2	2.2	3.9	5.0	2.3	7.2	1.1	1.1	.67	2.6
3	1.2	.77	3.0	2.2	3.8	5.5	2.2	4.6	1.1	1.0	.68	2.1
4	1.7	.77	2.9	2.2	3.7	7.0	2.1	3.4	1.1	.92	.66	2.1
5	1.3	.82	2.8	2.2	3.7	5.6	2.3	2.9	1.1	.91	.64	3.3
6	1.2	.88	2.8	2.2	3.7	4.8	2.4	2.6	1.2	.93	.64	2.4
7	1.1	.87	2.7	2.2	3.6	4.4	2.2	2.4	1.8	1.0	.64	2.3
8	1.0	.83	2.6	2.1	3.4	4.3	2.2	2.2	1.8	.94	.70	2.3
9	.97	.81	2.6	2.1	3.3	4.5	2.1	2.1	1.9	.86	1.6	2.5
10	.96	.78	2.9	2.0	3.2	4.3	2.0	2.1	1.5	.82	1.3	2.0
11	.96	.77	2.7	2.0	3.0	3.9	1.9	2.8	1.3	.81	1.0	1.8
12	.91	.77	3.3	2.0	3.2	3.6	1.9	2.6	1.2	.79	.85	1.7
13	.88	.77	2.9	2.0	3.7	3.3	1.9	2.3	1.2	.82	.89	1.6
14	.86	.74	2.7	2.0	3.2	3.1	1.9	2.1	1.1	.77	1.2	1.6
15	.86	.73	2.6	1.9	3.0	3.0	1.9	1.9	1.1	.81	1.8	1.5
16	.83	.72	2.6	1.9	2.9	2.8	1.9	1.8	1.0	.94	.86	1.4
17	.81	.70	2.5	2.0	2.8	2.8	1.8	1.7	1.4	.81	.77	1.7
18	.79	.69	2.5	2.0	2.8	2.7	1.7	1.6	1.3	.75	6.1	2.6
19	.77	.68	2.4	1.9	2.8	2.6	1.7	1.6	1.1	1.1	4.7	2.1
20	.80	.68	2.4	1.9	2.8	2.6	1.7	1.6	1.0	1.1	4.0	1.7
21	.86	.68	2.3	2.2	4.7	2.5	2.5	1.5	1.0	1.1	6.1	1.6
22	.86	.95	2.3	25	11	2.5	2.3	1.5	1.0	.84	6.2	1.7
23	.82	24	2.3	33	6.2	2.6	2.0	1.6	1.4	.75	4.7	4.3
24	.80	8.2	2.3	14	4.8	3.0	1.8	1.4	1.8	.73	3.9	4.0
25	.77	5.1	2.3	8.9	4.2	2.7	1.7	1.4	1.5	.74	3.9	3.6
26	.77	4.5	2.2	6.8	3.9	2.6	1.6	1.4	1.3	.73	4.0	5.5
27	.77	4.1	2.2	5.5	3.6	2.5	1.5	1.3	1.3	.70	3.3	4.3
28	.77	3.8	2.1	5.1	3.4	2.4	1.4	1.3	1.2	.68	2.9	4.6
29	.77	3.6	2.1	4.7	---	2.3	1.4	1.3	1.2	.68	2.6	4.5
30	.77	3.5	2.1	4.5	---	2.3	1.7	1.2	1.1	.67	2.4	3.9
31	.77	---	2.2	4.3	---	2.4	---	1.2	---	.66	2.3	---
TOTAL	28.66	73.75	80.0	155.2	108.4	107.0	58.4	68.6	38.3	26.56	72.66	79.4
MEAN	.92	2.46	2.58	5.01	3.87	3.45	1.95	2.21	1.28	.86	2.34	2.65
MAX	1.7	24	3.5	33	11	7.0	2.5	7.2	1.9	1.1	6.2	5.5
MIN	.77	.68	2.1	1.9	2.8	2.3	1.4	1.2	1.0	.66	.64	1.4
AC-FT	57	146	159	308	215	212	116	136	76	53	144	157

WTR YR 1989 TOTAL 896.93 MEAN 2.46 MAX 33 MIN .64 AC-FT 1780

COASTAL AREA BETWEEN ST. JOHNS RIVER AND PONCE DE LEON INLET

02247510 TOMOKA RIVER NEAR HOLLY HILL, FL

LOCATION.--Lat 29°13'02", long 81°06'32", in NW¼ sec.9, T.15 S., R.32 E., Volusia County, Hydrologic Unit 03080201, near center of span on downstream side of bridge on 11th Street extension, 0.3 mi southwest of Interstate Highway 95, 2 mi upstream from Priest Branch, 4.5 mi southwest of Holly Hill, and 12 mi upstream from mouth.

DRAINAGE AREA.--76.8 mi^2.

PERIOD OF RECORD.--October 1964 to current year.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (Florida Department of Transportation bench mark).

REMARKS.--Estimated daily discharges: Feb. 26 to Apr. 13. Records good except for estimated daily discharges, which are poor.

AVERAGE DISCHARGE.-25 years, 52.6 ft^3/s, 9.30 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,100 ft^3/s, Oct. 19, 1968, gage height, 12.92 ft; no flow for part or all of Feb. 16, 20-26, Feb. 28 to Mar. 1, 1968 (creek dry at gage), caused by temporary earthen dam just upstream, and June 26 to July 8, 1981.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Sept. 11, 1964, reached a stage of 12.65 ft, from floodmarks, discharge, 2,170 ft^3/s.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 350 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 23	0300	*631	*10.44	No other peak greater than base discharge.			

Minimum discharge, 0.26 ft^3/s, July 30, gage height, 6.12 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	1.0	9.1	3.2	37	12	7.0	34	1.6	2.4	.36	3.0
2	8.4	1.0	7.9	3.2	39	17	4.6	58	1.5	1.9	.50	4.1
3	9.8	.96	7.0	3.0	39	25	4.3	39	1.4	1.5	.67	3.3
4	31	1.3	6.5	2.9	32	26	4.0	21	1.7	1.3	2.0	3.2
5	25	1.9	6.1	2.6	29	19	6.8	15	2.3	1.2	2.1	4.6
6	18	2.8	5.6	2.5	27	15	6.7	11	3.6	1.1	1.3	4.7
7	14	2.2	5.3	2.5	26	12	6.0	8.7	8.2	1.4	.76	4.4
8	9.0	1.6	5.0	2.7	26	10	5.1	6.9	13	1.2	.76	4.0
9	6.2	1.3	5.1	6.5	23	13	4.7	5.8	19	.98	3.4	4.3
10	5.2	1.2	6.6	7.3	19	11	4.3	6.2	11	.84	4.4	3.4
11	4.5	1.1	7.0	4.7	17	9.1	4.1	14	5.7	.77	3.3	2.7
12	3.8	1.0	11	3.5	15	8.2	3.9	14	3.8	.82	2.7	2.4
13	3.1	1.0	10	2.9	15	7.6	3.8	9.5	4.1	.82	3.1	2.2
14	2.7	1.1	8.0	2.6	13	7.2	3.7	7.1	2.9	.73	4.0	2.2
15	2.3	1.0	6.8	2.7	12	6.8	3.6	5.5	2.5	.82	8.3	2.0
16	2.1	.98	6.0	4.6	12	6.4	4.7	4.6	2.0	1.7	6.5	1.8
17	1.9	.92	5.6	3.4	11	6.1	4.2	3.9	3.5	1.8	3.4	2.1
18	1.8	.89	5.2	2.6	9.9	5.9	3.2	3.4	6.0	1.2	10	4.7
19	1.7	.80	4.8	2.3	9.6	5.6	2.7	3.1	4.9	2.2	20	5.4
20	1.6	.80	4.5	2.1	9.2	5.5	2.8	2.9	3.3	2.5	17	4.2
21	1.6	.81	4.3	3.8	12	5.3	8.8	2.8	2.5	3.3	16	4.1
22	1.5	2.7	4.2	159	46	5.2	9.6	3.3	2.8	3.7	14	6.4
23	1.3	147	4.5	491	31	6.2	5.8	3.6	6.9	2.1	9.3	15
24	1.3	133	5.1	231	21	9.8	3.8	2.8	9.4	1.3	6.6	28
25	1.2	61	4.8	132	17	6.6	2.9	2.5	6.7	1.2	6.0	18
26	1.1	44	4.3	88	15	5.6	2.4	2.5	4.0	.90	7.1	23
27	1.1	27	4.0	64	13	5.1	2.2	2.4	2.8	.65	6.1	16
28	1.0	17	3.7	57	12	4.8	2.0	2.1	2.2	.52	4.9	15
29	1.0	13	3.6	59	---	4.6	1.8	2.0	2.8	.44	4.0	15
30	1.0	10	3.4	44	---	4.3	3.9	1.9	2.9	.33	3.4	11
31	1.0	---	3.4	39	---	5.6	---	1.7	---	.47	3.2	---
TOTAL	177.2	480.36	178.4	1435.6	587.7	291.5	133.4	301.2	145.0	42.09	175.15	220.2
MEAN	5.72	16.0	5.75	46.3	21.0	9.40	4.45	9.72	4.83	1.36	5.65	7.34
MAX	31	147	11	491	46	26	9.6	58	19	3.7	20	28
MIN	1.0	.80	3.4	2.1	9.2	4.3	1.8	1.7	1.4	.33	.36	1.8
CFSM	.07	.21	.07	.60	.27	.12	.06	.13	.06	.02	.07	.10
IN.	.09	.23	.09	.70	.28	.14	.06	.15	.07	.02	.08	.11

CAL YR 1988 TOTAL 5420.34 MEAN 14.8 MAX 245 MIN .31 CFSM .19 IN. 2.63
WTR YR 1989 TOTAL 4167.80 MEAN 11.4 MAX 491 MIN .33 CFSM .15 IN. 2.02

ST. JOHNS RIVER

COASTAL AREA BETWEEN ST. JOHNS RIVER AND PONCE DE LEON INLET

02248000 SPRUCE CREEK NEAR SAMSULA, FL
(National stream-quality accounting network station)

LOCATION.--Lat 29°03'01", long 81°02'49", in SE¼ sec.1, T.17 S., R.32 E., Volusia County, Hydrologic Unit 03080201, on left bank 50 ft downstream from bridge on State Highway 40A, 1.8 mi north of Samsula, 8 mi west of New Smyrna Beach, 10 mi upstream from Turnbull Bay, and 13 mi upstream from mouth.

DRAINAGE AREA.--33.4 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1951 to current year.

REVISED RECORDS.--WSP 1624: 1956. WDR FL-75-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 6.25 ft above National Geodetic Vertical Datum of 1929. Prior to Nov. 13, 1971, at sites within 100 ft at same datum.

REMARKS.--Estimated daily discharges: Oct. 20 to Nov. 23 and July 25,26. Records fair. Some diversions for irrigation above station.

AVERAGE DISCHARGE.--38 years, 31.6 ft^3/s, 12.85 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,610 ft^3/s, Sept. 10, 1964; maximum gage height, 15.49 ft, Oct. 8, 1953; no flow Apr. 23-26, May 17, 1962; minimum gage height, 0.37 ft, May 22,23, 1973.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 400 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 22	2400	*735	*11.74	No other peak greater than base discharge.			

Minimum discharge, 0.57 ft^3/s, Aug. 6,7,8, gage height, 1.13 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23	1.2	21	4.6	34	6.4	2.0	2.4	1.1	6.8	.90	2.4
2	18	1.2	18	4.5	30	15	1.8	2.2	.98	5.6	.89	1.9
3	19	1.4	16	4.4	27	18	1.6	1.4	.93	3.9	.77	1.5
4	30	2.5	14	4.2	24	18	1.6	1.2	.84	2.5	.73	1.3
5	21	3.6	13	4.0	22	16	1.6	1.1	.84	2.1	.70	1.1
6	16	4.2	12	3.9	20	13	1.5	1.1	1.1	1.7	.63	1.0
7	13	3.6	11	3.9	18	11	1.3	.99	1.1	1.7	.60	1.0
8	11	3.0	10	3.9	17	12	1.3	.95	1.0	1.4	1.5	2.0
9	9.0	2.6	9.8	4.0	15	13	1.3	.91	1.1	1.2	3.5	1.9
10	7.9	2.2	9.7	3.9	13	14	1.3	1.0	1.0	1.0	4.6	1.1
11	7.0	1.8	9.8	3.9	11	12	1.3	1.6	.93	1.7	2.0	.87
12	6.2	1.6	13	3.9	9.6	11	1.3	1.1	.91	1.3	1.8	.78
13	5.3	1.5	14	3.8	9.1	8.9	1.3	1.1	1.0	.91	4.1	.73
14	4.8	1.4	12	3.7	8.8	8.0	1.3	1.1	.95	.78	4.6	.70
15	4.6	1.3	10	3.7	8.2	6.7	1.4	1.2	.79	.80	5.9	.71
16	3.6	1.2	9.2	4.0	7.5	5.9	1.6	1.0	.74	.73	5.4	.65
17	3.2	1.2	8.5	3.8	6.9	5.2	1.3	.99	1.4	.89	4.8	1.4
18	2.9	1.1	7.7	3.7	6.5	4.7	1.2	.95	.80	2.1	12	1.1
19	2.6	1.1	7.1	3.6	6.5	4.2	1.2	.91	.76	3.0	13	1.1
20	2.4	1.0	6.6	3.5	6.7	3.8	1.2	.90	.73	3.4	10	.94
21	2.3	4.0	6.6	5.3	6.4	3.6	1.4	5.8	.74	4.2	15	.81
22	2.1	66	6.1	339	6.5	3.3	1.2	6.3	1.3	4.4	12	.79
23	2.0	330	6.0	552	6.7	3.2	1.1	2.0	1.3	4.0	8.9	8.8
24	1.9	149	6.1	343	6.9	3.1	1.0	1.4	1.8	3.4	6.8	20
25	1.8	87	5.9	247	6.7	2.8	.92	1.3	1.4	2.5	5.3	28
26	1.7	60	5.6	161	6.2	2.5	.90	1.2	3.7	1.9	6.8	41
27	1.6	44	5.3	101	5.8	2.3	.85	1.2	3.2	1.6	12	27
28	1.5	36	5.2	71	5.5	2.1	.80	1.1	2.3	1.4	9.4	35
29	1.4	29	5.0	56	---	1.9	.78	2.2	1.9	1.2	6.5	31
30	1.3	24	4.8	46	---	1.7	1.7	1.3	2.6	1.1	4.5	23
31	1.2	---	4.7	39	---	1.9	---	1.2	---	1.0	3.3	---
TOTAL	229.3	867.7	293.7	2039.2	351.5	235.2	39.05	49.10	39.24	70.21	168.92	239.58
MEAN	7.40	28.9	9.47	65.8	12.6	7.59	1.30	1.58	1.31	2.26	5.45	7.99
MAX	30	330	21	552	34	18	2.0	6.3	3.7	6.8	15	41
MIN	1.2	1.0	4.7	3.5	5.5	1.7	.78	.90	.73	.73	.60	.65
CFSM	.22	.87	.28	1.97	.38	.23	.04	.05	.04	.07	.16	.24
IN.	.26	.97	.33	2.27	.39	.26	.04	.05	.04	.08	.19	.27

CAL YR 1988 TOTAL 5180.30 MEAN 14.2 MAX 330 MIN .80 CFSM .42 IN. 5.77
WTR YR 1989 TOTAL 4622.70 MEAN 12.7 MAX 552 MIN .60 CFSM .38 IN. 5.15

02248000 SPRUCE CREEK NEAR SAMSULA, FL--Continued
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1964-71, 1974 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: March 1975 to April 1981; October 1983 to current year
WATER TEMPERATURE: March 1975 to April 1981; October 1983 to current year.

INSTRUMENTATION.--Water-quality monitor since March 1975. Digital recorder--60-minute interval.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily mean, 987 microsiemens, Apr. 3, 1976; minimum daily mean, 21 microsiemens, Sept. 16, 1976.
WATER TEMPERATURE: Maximum daily mean, 29.0°C, July 12, 1976; minimum daily mean, 7.0°C, Jan. 20, 1977.

EXTREMES OUTSIDE PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: Maximum observed, 31.0°C, Aug. 17, 1981.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily mean, 746 microsiemens, June 11; minimum daily mean, 72 microsiemens, Jan. 26.
WATER TEMPERATURE: Maximum daily mean (more than 20 percent missing record), 27.5°C, Sept. 28,29; minimum daily mean, 9.8°C, Dec. 19.

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	226	522	125	396	120	373	503	614	616	244	434	284
2	224	509	154	403	129	380	511	570	638	132	459	312
3	224	503	165	421	148	381	518	605	638	111	480	341
4	224	507	178	428	172	339	519	645	643	128	502	369
5	221	507	193	439	187	293	534	650	654	161	507	395
6	220	500	208	445	199	266	564	660	652	183	517	412
7	220	488	220	452	211	259	591	680	666	194	548	439
8	220	470	233	460	221	261	599	700	662	211	545	451
9	225	474	247	468	228	265	601	701	658	231	421	405
10	233	489	257	477	231	254	607	706	700	273	380	409
11	241	490	270	482	234	277	634	682	746	295	357	414
12	250	534	260	490	236	282	643	661	737	277	348	409
13	259	519	256	495	223	279	648	691	683	286	350	408
14	285	537	267	501	213	278	651	695	675	313	332	407
15	319	537	266	506	230	261	650	678	670	343	330	406
16	328	557	269	502	257	271	633	689	670	356	352	415
17	356	549	272	501	273	290	655	706	668	373	360	420
18	370	573	281	509	316	307	660	722	671	343	289	394
19	383	567	305	516	356	325	672	725	664	325	250	380
20	406	584	307	522	369	352	665	726	656	268	263	375
21	415	582	295	520	374	371	653	584	650	270	253	374
22	434	581	301	483	358	394	659	474	646	285	243	368
23	449	427	305	265	360	406	684	482	643	301	231	356
24	457	188	312	147	364	426	688	508	638	320	230	334
25	467	85	319	107	378	439	693	543	626	310	235	319
26	479	95	332	72	371	446	703	571	610	316	249	308
27	488	119	345	76	365	468	693	592	584	350	259	290
28	498	143	360	106	367	475	711	599	452	372	235	271
29	506	153	375	115	---	500	708	629	326	385	214	253
30	517	137	387	125	---	517	705	632	296	402	227	247
31	524	---	391	121	---	520	---	618	---	421	254	---
MEAN	344	431	273	373	267	353	632	637	628	283	344	365
MAX	524	584	391	522	378	520	711	726	746	421	548	451
MIN	220	85	125	72	120	254	503	474	296	111	214	247

COASTAL AREA BETWEEN ST. JOHNS RIVER AND PONCE DE LEON INLET

02248000 SPRUCE CREEK NEAR SAMSULA, FL--Continued
(National stream-quality accounting network station)

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24.2	20.2	17.4	16.4	18.4	18.0	---	---	20.2	---	23.1	25.6
2	24.0	17.9	14.9	16.7	17.2	18.3	17.7	18.2	20.4	---	22.9	26.5
3	24.9	17.5	14.0	17.4	15.9	19.1	18.9	19.4	22.7	---	23.0	25.9
4	24.4	19.9	13.9	14.5	17.2	20.5	19.9	---	20.9	---	---	---
5	24.4	20.9	13.9	14.6	17.5	17.6	20.1	21.3	---	---	---	---
6	23.8	19.7	14.8	15.5	17.4	22.6	17.7	21.3	21.0	---	---	---
7	23.4	17.9	16.5	15.5	16.8	18.9	17.9	20.2	---	---	23.7	24.4
8	21.0	17.0	17.0	14.5	16.3	16.0	18.5	19.1	20.1	---	24.3	---
9	20.8	17.4	17.8	15.4	16.1	---	18.0	---	---	---	24.9	---
10	20.6	18.4	17.9	15.3	---	---	18.3	---	24.4	---	---	---
11	20.4	18.8	17.3	16.3	12.9	---	18.4	---	24.5	---	---	---
12	19.8	19.1	16.5	17.0	11.1	---	18.3	---	24.5	---	---	---
13	19.6	19.9	14.1	17.2	13.2	18.2	19.1	19.1	23.7	---	---	---
14	20.0	19.6	12.3	17.6	17.5	19.5	19.8	---	---	---	25.2	---
15	19.2	19.0	13.1	17.2	18.6	19.9	19.4	21.1	---	---	25.2	---
16	20.5	19.8	14.1	17.6	19.0	20.6	19.9	---	24.2	---	25.5	---
17	21.1	20.8	13.2	16.3	19.7	20.9	19.6	---	---	---	---	---
18	21.5	21.5	10.7	17.1	19.1	20.9	19.3	20.3	---	---	---	24.4
19	21.5	21.3	9.8	16.4	18.3	21.0	---	20.2	---	---	---	24.1
20	21.4	21.6	11.8	16.5	18.5	21.0	---	18.4	---	25.0	24.8	24.3
21	21.8	21.7	11.9	17.2	20.3	21.5	19.0	20.2	---	---	25.3	24.6
22	21.2	21.6	12.4	15.6	20.0	21.5	---	21.5	---	---	26.3	24.2
23	---	21.1	15.8	13.9	---	21.3	---	---	23.2	---	25.9	24.1
24	19.2	19.5	15.3	14.2	---	18.8	19.3	18.2	---	---	27.3	23.8
25	19.7	18.5	11.3	15.4	---	18.0	---	17.7	---	23.3	26.0	25.5
26	18.6	19.0	13.9	16.3	---	19.4	19.8	---	---	25.4	---	25.4
27	19.4	20.2	14.0	15.8	---	20.6	---	---	---	23.8	---	26.3
28	20.2	20.7	15.4	16.9	---	20.4	22.2	---	---	23.4	27.3	27.5
29	20.2	17.0	15.8	17.6	---	18.8	21.8	---	---	23.9	27.2	27.5
30	20.2	16.9	15.2	18.3	---	21.3	20.6	---	---	23.1	26.0	27.0
31	20.9	---	14.8	19.0	---	21.7	---	22.3	---	23.1	26.3	---
MEAN	---	19.5	14.4	16.3	---	---	---	---	---	---	---	---
MAX	---	21.7	17.9	19.0	---	---	---	---	---	---	---	---
MIN	---	16.9	9.8	13.9	---	---	---	---	---	---	---	---

COASTAL AREA BETWEEN ST. JOHNS RIVER AND PONCE DE LEON INLET

02248000 SPRUCE CREEK NEAR SAMSULA, FL--Continued
(National stream-quality accounting network station)

WATER-QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	GAGE HEIGHT (FEET) (00065)	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	OXYGEN, DIS-SOLVED (MG/L) (00300)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)
DEC										
06...	1100	1.80	12	202	7.2	14.5	7.6	--	--	74
MAR										
15...	0830	1.63	6.8	255	7.1	18.5	6.1	270	230	92
APR										
11...	1107	1.25	1.3	593	7.8	19.5	5.8	1400	240	220
MAY										
31...	1108	1.20	1.3	629	7.7	23.0	3.7	540	78	250
JUL										
20...	0940	1.39	3.1	266	7.4	25.0	4.4	E10	360	100
SEP										
07...	1702	1.19	0.94	422	--	26.0	4.5	190	65	170

DATE	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)
DEC										
06...	24	3.5	17	1.1	45	26	28	0.10	9.2	217
MAR										
15...	31	3.5	19	0.70	73	23	29	0.10	7.1	211
APR										
11...	79	6.1	35	0.90	203	3.2	55	0.20	13	378
MAY										
31...	87	6.7	38	1.8	259	5.0	58	0.20	15	374
JUL										
20...	34	3.5	18	0.80	105	<1.0	27	0.10	8.9	196
SEP										
07...	58	4.9	29	0.70	146	<1.0	43	0.10	13	277

DATE	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS-PHOROUS TOTAL (MG/L AS P) (00665)	PHOS-PHOROUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHOROUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)	SEDI-MENT, SUS-PENDED (MG/L) (80154)
DEC										
06...	0.010	<0.100	0.050	0.040	1.3	0.050	0.040	0.030	100	5
MAR										
15...	0.020	0.190	0.080	0.090	1.2	0.060	0.040	0.040	100	4
APR										
11...	<0.010	<0.100	0.090	0.090	0.90	0.090	0.070	0.060	75	4
MAY										
31...	0.010	<0.100	0.130	0.140	0.60	0.130	0.040	0.040	--	--
JUL										
20...	0.010	0.110	0.040	0.050	1.6	0.100	0.060	0.050	100	7
SEP										
07...	0.010	<0.100	0.080	0.080	1.6	0.110	0.040	0.050	--	--

COASTAL AREA BETWEEN ST. JOHNS RIVER AND PONCE DE LEON INLET

02248000 SPRUCE CREEK NEAR SAMSULA, FL--Continued
(National stream-quality accounting network station)

WATER-QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	ALUMINUM, DISSOLVED (UG/L AS AL) (01106)	ARSENIC DISSOLVED (UG/L AS AS) (01000)	BARIUM, DISSOLVED (UG/L AS BA) (01005)	BERYLLIUM, DISSOLVED (UG/L AS BE) (01010)	CADMIUM DISSOLVED (UG/L AS CD) (01025)	CHROMIUM, DISSOLVED (UG/L AS CR) (01030)	COBALT, DISSOLVED (UG/L AS CO) (01035)	COPPER, DISSOLVED (UG/L AS CU) (01040)	LEAD, DISSOLVED (UG/L AS PB) (01049)	LITHIUM DISSOLVED (UG/L AS LI) (01130)
MAR 15...	350	<1	17	<0.5	<1	2	<3	<1	<5	9
MAY 31...	20	<1	27	<0.5	1	<1	<3	1	4	12
JUL 20...	100	1	15	<0.5	<1	<1	<3	3	1	6
SEP 07...	70	<1	37	<0.5	<1	2	<3	2	3	9

DATE	MANGANESE, DISSOLVED (UG/L AS MN) (01056)	MERCURY DISSOLVED (UG/L AS HG) (71890)	MOLYBDENUM, DISSOLVED (UG/L AS MO) (01060)	NICKEL, DISSOLVED (UG/L AS NI) (01065)	SELENIUM, DISSOLVED (UG/L AS SE) (01145)	SILVER, DISSOLVED (UG/L AS AG) (01075)	STRONTIUM, DISSOLVED (UG/L AS SR) (01080)	VANADIUM, DISSOLVED (UG/L AS V) (01085)	ZINC, DISSOLVED (UG/L AS ZN) (01090)
MAR 15...	12	0.5	<10	<1	<1	<1.0	160	<6	4
MAY 31...	31	0.5	<10	1	<1	<1.0	460	<6	10
JUL 20...	10	3.7	<10	2	<1	<1.0	200	<6	20
SEP 07...	19	<0.1	10	1	<1	<1.0	310	<6	20

ST. JOHNS RIVER

COASTAL AREA BETWEEN ST. JOHNS RIVER AND PONCE DE LEON INLET

02248040 B-19 CANAL AT PORT ORANGE, FL

LOCATION.--Lat 29°06'48", long 81°01'31", in NW¼ sec.17, T.16 S., R.33 E., Volusia County, Hydrologic Unit 03080201, 85 ft upstream from culvert on State Highway 415, 1.75 mi above mouth, at Port Orange.

DRAINAGE AREA.--7.6 mi^2, approximately.

PERIOD OF RECORD.--November 1982 to September 1988 (gage heights and discharge measurements only), October 1988 to September 1989. Records prior to October 1988 are unpublished and available in files of the Orlando Subdistrict office.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (Florida Department of Transportation bench mark).

REMARKS.--Records fair.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 210 ft^3/s, Jan. 22, 1989; maximum gage height, 18.95 ft, Sept. 21, 1985; minimum discharge, 0.52 ft^3/s, July 10, 1989; minimum gage height, 15.06 ft, Aug. 10, 1987.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 210 ft^3/s, Jan. 22, gage height, 18.44 ft; minimum, 0.52 ft^3/s, July 10, gage height, 15.34 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.0	2.9	12	4.6	15	6.2	3.8	6.4	1.4	1.2	1.5	3.3
2	6.9	3.1	10	6.5	15	10	2.8	6.1	1.4	1.3	1.5	4.1
3	11	4.1	8.9	4.5	12	8.8	5.1	4.7	1.4	1.2	1.9	3.0
4	21	5.1	6.5	6.7	9.8	8.7	3.7	4.1	1.5	1.3	2.0	2.8
5	15	7.0	7.8	4.1	9.0	7.4	4.4	3.9	1.5	1.2	1.1	2.9
6	11	5.3	8.1	3.2	8.6	7.8	4.1	3.5	1.9	1.3	1.2	3.1
7	8.5	4.2	8.0	4.4	11	8.6	2.8	3.0	1.9	1.2	1.4	2.6
8	7.1	3.9	7.6	3.7	13	7.7	2.4	2.9	2.4	1.3	1.2	7.5
9	5.8	3.9	7.6	6.9	7.1	9.0	2.3	2.8	2.2	1.3	2.5	5.5
10	5.0	4.3	8.6	5.7	6.2	8.4	2.5	4.6	2.2	1.2	4.0	3.6
11	5.0	3.2	7.0	3.5	5.9	7.1	2.4	5.7	1.8	1.5	6.3	3.0
12	4.9	2.8	17	3.1	5.6	5.4	2.5	4.5	1.9	1.4	6.2	2.6
13	4.7	2.3	14	3.9	5.4	7.5	2.9	3.8	2.0	1.3	5.0	2.6
14	4.3	1.9	11	6.4	5.3	7.5	2.6	3.3	2.0	1.2	5.1	2.3
15	4.1	2.9	10	3.5	5.1	6.2	2.8	3.7	1.8	1.4	4.6	8.2
16	3.5	2.7	8.5	9.8	4.9	6.5	2.5	4.1	1.7	2.0	4.2	9.3
17	2.9	3.2	8.0	9.5	4.7	5.0	2.4	4.5	1.9	2.6	3.4	13
18	3.0	2.9	5.9	5.8	4.6	6.9	2.5	4.1	1.8	2.4	4.8	11
19	3.0	2.4	10	5.7	4.6	4.0	2.4	4.3	1.8	2.4	5.0	9.1
20	3.0	1.8	8.2	8.0	4.5	5.8	3.1	2.9	1.8	2.5	5.8	7.6
21	2.9	1.6	5.3	6.3	5.0	6.6	2.8	3.0	1.9	1.6	8.0	6.4
22	2.7	7.3	5.2	115	7.0	5.1	2.5	3.2	2.0	1.7	9.2	5.9
23	2.8	120	9.3	164	6.6	3.9	2.3	2.8	7.5	1.5	7.8	14
24	2.5	70	6.1	97	5.7	5.6	2.2	2.8	3.5	1.4	6.0	18
25	3.4	36	5.9	55	5.1	5.0	2.6	2.7	1.8	1.3	6.4	17
26	3.4	23	11	38	4.8	3.5	2.5	2.3	1.5	1.3	9.0	24
27	2.9	17	6.7	29	4.7	4.7	2.6	2.2	1.3	1.3	8.1	22
28	2.3	15	4.9	23	4.4	3.6	2.5	2.2	1.3	1.4	6.5	20
29	2.2	13	5.7	18	---	4.0	2.4	2.5	1.2	1.3	5.2	18
30	2.0	15	8.3	21	---	4.1	3.3	2.2	1.2	1.4	4.3	15
31	2.8	---	6.2	16	---	5.5	---	1.6	---	1.6	3.7	---
TOTAL	168.6	387.8	259.3	691.8	200.6	196.1	85.7	110.4	59.5	47.0	142.9	267.4
MEAN	5.44	12.9	8.36	22.3	7.16	6.33	2.86	3.56	1.98	1.52	4.61	8.91
MAX	21	120	17	164	15	10	5.1	6.4	7.5	2.6	9.2	24
MIN	2.0	1.6	4.9	3.1	4.4	3.5	2.2	1.6	1.2	1.2	1.1	2.3

WTR YR 1989 TOTAL 2617.1 MEAN 7.17 MAX 164 MIN 1.1

ST. JOHNS RIVER

COASTAL AREA BETWEEN PONCE DE LEON INLET AND SEBASTIAN INLET

02249950 C-1 CANAL AT RED BUD CIRCLE, AT PALM BAY, FL

LOCATION.--Lat 28°00'47", long 80°43'30", in NE¼ sec.33, T.28 S., R.36 E., Brevard County, Hydrologic Unit 03080202, on right bank 3.2 mi upstream from bridge on Minton Road, 7.3 mi upstream from control structure, and 8 mi southwest of Palm Bay.

DRAINAGE AREA.--Indeterminate.

PERIOD OF RECORD.--January 1988 to current year.

GAGE.--Water-stage recorder. Datum of gage has not been determined.

REMARKS.--Records fair above 50 ft^3/s and poor below. Flow affected at times by operation of control structure 7.3 mi downstream.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 373 ft^3/s, Mar. 13, 1988, gage height, 11.54 ft; minimum, 2.3 ft^3/s, May 16,17, 1988; minimum gage height, 4.73 ft, July 4,5, 1988, June 5,6, 1989.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 319 ft^3/s, Jan. 22, gage height, 10.82 ft; minimum, 2.7 ft^3/s, June 5,6, gage height, 4.73 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20	8.7	15	39	93	37	39	57	7.9	37	7.1	26
2	15	9.0	16	40	92	49	41	57	6.3	36	8.1	24
3	14	8.3	23	41	87	96	39	43	5.0	31	8.7	22
4	16	12	35	44	81	125	36	43	4.0	28	8.6	23
5	15	15	38	45	79	103	36	41	3.2	25	8.0	21
6	13	14	36	45	77	88	35	39	2.8	27	7.2	20
7	12	12	36	46	77	73	35	33	6.6	28	6.9	18
8	10	10	28	44	74	76	35	28	39	26	6.9	17
9	10	9.6	27	44	72	83	35	22	24	22	45	29
10	9.3	9.2	26	41	71	75	34	18	11	17	83	20
11	9.5	8.9	27	39	69	63	28	15	5.5	12	87	16
12	8.9	8.7	37	38	66	57	22	21	3.7	12	59	15
13	8.6	8.7	41	36	63	51	39	32	3.6	20	62	13
14	8.5	8.7	43	36	60	48	39	41	6.8	23	70	13
15	9.0	8.9	38	36	59	46	38	50	15	28	55	13
16	11	9.4	35	36	66	43	51	29	25	33	43	14
17	11	9.3	31	36	63	40	36	18	33	37	35	18
18	11	9.3	29	34	59	36	35	20	41	33	38	29
19	12	9.4	28	32	56	33	36	19	32	19	64	34
20	11	9.4	28	47	52	31	50	17	25	45	85	30
21	10	9.4	25	77	49	35	74	16	28	19	104	24
22	9.9	10	27	275	48	46	43	32	35	39	78	20
23	9.8	28	29	232	46	49	33	23	41	30	60	55
24	9.7	24	31	175	40	31	27	16	42	19	49	104
25	9.5	21	32	142	36	23	39	13	45	14	42	95
26	9.2	19	33	117	34	21	41	16	39	11	42	114
27	8.9	18	34	105	34	20	30	21	34	9.1	58	95
28	8.6	16	35	94	34	19	26	24	32	8.1	66	95
29	8.4	15	36	86	---	18	26	21	39	7.1	48	78
30	8.1	15	37	80	---	21	47	12	39	7.3	36	64
31	8.2	---	38	84	---	30	---	9.3	---	7.4	30	---
TOTAL	335.1	373.9	974	2266	1737	1566	1125	846.3	674.4	710.0	1400.5	1159
MEAN	10.8	12.5	31.4	73.1	62.0	50.5	37.5	27.3	22.5	22.9	45.2	38.6
MAX	20	28	43	275	93	125	74	57	45	45	104	114
MIN	8.1	8.3	15	32	34	18	22	9.3	2.8	7.1	6.9	13
AC-FT	665	742	1930	4490	3450	3110	2230	1680	1340	1410	2780	2300

WTR YR 1989 TOTAL 13167.2 MEAN 36.1 MAX 275 MIN 2.8 AC-FT 26120

ST. JOHNS RIVER

COASTAL AREA BETWEEN PONCE DE LEON INLET AND SEBASTIAN INLET

02249970 C-10 CANAL AT MALABAR ROAD, AT PALM BAY, FL

LOCATION.--Lat 27°59'56", long 80°42'47", in SE¼ sec.34, T.28 S., R.36 E., Brevard County, Hydrologic Unit 03080202, near center of channel on downstream side of bridge on Malabar Road, 1 mi upstream from mouth, 5.5 mi west of Interstate Highway 95, and 8 mi southwest of Palm Bay City Hall.

DRAINAGE AREA.--Indeterminate.

PERIOD OF RECORD.--January 1988 to current year.

GAGE.--Water-stage recorder. Datum of gage has not been determined.

REMARKS.--Records fair above 40 ft^3/s and poor below.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 409 ft^3/s, Mar. 13, 1988, gage height, 11.34 ft; minimum, 8.3 ft^3/s, May 24, 1988; minimum gage height, 5.09 ft, June 7, 1989.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 272 ft^3/s, Jan 22, gage height, 10.35 ft; minimum, 9.4 ft^3/s, June 7, gage height, 5.09 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24	15	13	16	42	23	27	39	14	19	38	60
2	22	15	12	16	41	25	28	44	13	18	43	57
3	22	14	12	16	38	72	29	36	12	17	45	54
4	23	16	13	16	34	105	30	34	11	15	45	56
5	21	17	14	16	32	84	31	32	11	15	44	52
6	20	16	14	17	30	70	31	31	10	16	43	48
7	20	15	15	18	29	61	31	29	11	17	41	44
8	19	14	15	17	28	60	32	27	25	17	40	42
9	19	13	14	18	27	61	31	26	19	16	51	42
10	19	13	14	17	26	55	31	25	15	15	73	40
11	19	12	14	17	26	51	29	24	12	14	105	37
12	18	12	15	16	25	46	29	25	10	14	98	35
13	18	12	16	16	24	42	32	30	10	19	106	33
14	17	11	16	16	23	40	32	37	11	20	125	31
15	18	11	15	16	22	37	31	51	14	25	114	30
16	18	12	15	16	23	35	35	38	16	28	101	29
17	18	12	15	16	23	33	30	31	18	29	92	28
18	18	12	15	16	23	32	27	29	20	37	88	33
19	19	12	15	15	23	31	26	27	19	37	105	43
20	18	12	15	17	23	30	31	25	17	38	115	42
21	18	12	15	23	24	29	50	24	18	42	124	38
22	18	12	14	207	24	28	38	31	19	71	114	36
23	17	15	14	177	24	28	34	25	21	61	103	67
24	17	14	14	129	23	27	30	22	21	53	94	97
25	16	13	14	106	23	26	30	19	22	48	86	78
26	16	13	14	85	23	26	30	20	20	44	79	81
27	15	13	14	71	24	25	27	21	19	41	88	74
28	15	13	15	60	23	25	26	21	18	39	89	75
29	15	12	15	51	---	26	26	20	21	37	78	61
30	14	12	15	45	---	27	33	16	20	36	70	52
31	14	---	15	42	---	27	---	15	---	38	65	---
TOTAL	565	395	446	1324	750	1287	927	874	487	936	2502	1495
MEAN	18.2	13.2	14.4	42.7	26.8	41.5	30.9	28.2	16.2	30.2	80.7	49.8
MAX	24	17	16	207	42	105	50	51	25	71	125	97
MIN	14	11	12	15	22	23	26	15	10	14	38	28
AC-FT	1120	783	885	2630	1490	2550	1840	1730	966	1860	4960	2970

WTR YR 1989 TOTAL 11988 MEAN 32.8 MAX 207 MIN 10 AC-FT 23780

COASTAL AREA BETWEEN PONCE DE LEON INLET AND SEBASTIAN INLET

02249890 C-69 CANAL AT PALM BAY ROAD, AT PALM BAY, FL

LOCATION.--Lat 28°02'06", long 80°40'17", in SW¼ sec.19, T.28 S., R.37 E., Brevard County, Hydrologic Unit 03080202, near right bank on downstream side of culvert, 1.5 mi upstream from mouth, 3 mi south of U.S. Highway 192, and 5 mi west of Palm Bay City Hall.

DRAINAGE AREA.--Indeterminate.

PERIOD OF RECORD.--January 1988 to current year.

GAGE.--Water-stage recorder. Datum of gage has not been determined.

REMARKS.--Records fair.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 181 ft^3/s, Aug. 13, 1989, gage height, 8.42 ft; no flow Sept. 20,21,30,1989; minimum gage height, 4.68 ft, July 8,9,13, 1988.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 181 ft^3/s, Aug. 13, gage height, 8.42 ft; no flow Sept. 20,21,30; minimum gage height, 4.71 ft, Oct. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.68	.93	.74	.64	3.0	2.1	.95	4.2	.49	4.8	1.9	4.2
2	.69	.90	.69	.61	2.9	2.2	.87	5.0	.33	4.2	1.8	3.8
3	.72	.84	.66	.61	2.8	7.9	.80	3.6	.22	3.3	1.6	3.4
4	.75	1.0	.66	.60	2.8	5.6	.80	3.1	.13	2.7	1.5	3.0
5	.73	.83	.65	.57	2.6	3.7	.94	2.7	.03	1.9	1.2	4.4
6	.71	.69	.80	.58	2.6	3.4	.90	2.3	.08	1.3	1.0	3.8
7	.99	.95	.81	.57	2.5	3.4	.75	2.1	7.8	.94	.85	2.8
8	.97	.75	.70	.55	2.4	3.8	.70	1.8	17	.73	.69	2.6
9	.84	.58	.66	.56	2.3	3.9	.67	1.6	6.8	.54	40	6.0
10	.76	.49	.63	.62	2.3	3.3	.68	1.4	4.6	.35	115	4.1
11	.75	.41	.77	.73	2.2	3.0	.58	1.3	3.6	.21	149	3.2
12	.82	.45	1.0	.84	2.1	2.8	.49	1.1	2.9	.42	77	3.3
13	.91	.45	.82	.80	2.1	2.6	1.2	1.0	2.3	.82	165	3.2
14	.91	.38	.73	.73	2.0	2.5	1.1	1.0	1.8	.67	109	2.7
15	.93	.36	.70	.70	1.9	2.4	2.0	1.2	1.4	.45	62	1.4
16	1.0	.41	.72	.64	1.9	2.5	2.5	1.3	1.0	.25	46	.19
17	1.0	.37	.68	.62	1.8	2.3	1.4	1.1	.79	.62	33	.48
18	1.0	.31	.66	.66	1.8	2.2	1.1	.95	.65	4.4	24	.78
19	.99	.27	.66	.63	1.7	2.1	1.0	.85	.50	10	24	.15
20	.96	.24	.72	1.2	1.7	1.9	6.1	.79	.85	53	32	.00
21	.94	.20	.70	2.3	1.7	1.8	8.8	1.0	1.7	21	60	.00
22	.94	.24	.68	10	2.4	1.7	3.2	3.9	1.4	15	41	.03
23	.97	2.0	.65	5.4	2.3	1.6	2.3	2.7	1.0	9.5	26	.42
24	.93	1.2	.66	4.3	2.2	1.5	1.9	2.0	22	6.3	20	1.1
25	.94	1.0	.64	3.9	2.1	1.4	1.7	1.6	27	4.8	15	1.3
26	.94	.95	.63	3.7	2.1	1.4	1.5	1.4	10	3.8	12	3.0
27	.90	.89	.61	3.6	2.0	1.3	1.3	1.4	6.0	3.2	11	.44
28	.86	.82	.61	3.5	2.0	1.2	1.2	1.3	4.6	2.6	8.4	.15
29	.87	.76	.61	3.3	---	1.1	2.0	1.1	4.1	2.4	6.7	.04
30	.89	.75	.64	3.2	---	1.0	3.6	.90	4.6	3.0	5.3	.00
31	.89	---	.66	3.1	---	.96	---	.67	---	2.5	4.7	---
TOTAL	27.18	20.42	21.55	59.76	62.2	78.56	53.03	56.36	135.67	165.70	1096.64	59.98
MEAN	.88	.68	.70	1.93	2.22	2.53	1.77	1.82	4.52	5.35	35.4	2.00
MAX	1.0	2.0	1.0	10	3.0	7.9	8.8	5.0	27	53	165	6.0
MIN	.68	.20	.61	.55	1.7	.96	.49	.67	.03	.21	.69	.00
AC-FT	54	41	43	119	123	156	105	112	269	329	2180	119

WTR YR 1989 TOTAL 1837.05 MEAN 5.03 MAX 165 MIN .00 AC-FT 3640

ST. JOHNS RIVER

COASTAL AREA BETWEEN PONCE DE LEON INLET AND SEBASTIAN INLET

02250030 TURKEY CREEK AT PALM BAY, FL

LOCATION.--Lat 28°01'00", long 80°35'46;, in SE¼ sec.26, T.28 S., R.37 E., Brevard County, Hydrologic Unit 03080202, near right bank on downstream side of bridge on Port Malabar Boulevard, 1.6 mi southwest of the intersection of U.S. Highway 1 and State Highway 516 in Palm Bay, and 2.0 mi upstream from mouth.

DRAINAGE AREA.--105 mi^2, approximately.

PERIOD OF RECORD.--February 1981 to September 1983. October 1983 to December 1986 (gage heights only), January 1987 to September 1988 (fragmentary), October 1988 to September 1989.

GAGE.--Water-stage recorder and electromagnetic current meter recorder. Datum of gage is 5.00 ft below National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1986 at datum 5.00 ft higher.

REMARKS.--Estimated daily discharges: Oct. 1-4, Dec. 3-5, Feb. 25-27, Mar. 7, May 24 to July 6. Records fair above 400 ft^3/s and poor below. Stage and discharge are affected by tides in the Indian River.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge recorded, 1,220 ft^3/s, Nov. 20, 1987; maximum gage height, 9.73 ft, present datum, Sept. 21, 1985; minimum daily discharge recorded, 1.1 ft^3/s, July 17, 1988; minimum gage height, 4.62 ft, present datum, Apr. 5, 1985.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 942 ft^3/s, Jan. 22; maximum gage height, 8.24 ft, Jan. 22; minimum daily discharge, 18 ft^3/s, Dec. 2,3; minimum gage height, 4.89 ft, July 15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SP
1	80	51	19	53	151	63	75	242	64	56	66	124
2	80	56	18	52	147	94	85	250	60	55	72	118
3	75	52	18	49	126	590	99	188	58	55	62	114
4	75	58	24	44	119	676	97	143	56	53	58	116
5	87	69	32	52	138	497	87	131	55	53	56	107
6	88	65	44	51	121	392	82	115	53	40	49	94
7	81	61	65	54	113	340	76	101	60	30	147	88
8	80	50	54	53	119	290	76	145	150	52	173	81
9	84	45	56	52	98	286	82	156	130	52	74	88
10	59	42	65	51	101	245	91	151	140	39	241	86
11	69	39	61	54	100	204	91	136	160	39	68	78
12	69	36	72	50	99	162	93	107	100	39	55	69
13	70	34	66	46	100	102	100	106	27	38	60	58
14	70	32	73	44	99	129	198	110	30	42	100	52
15	72	36	78	43	54	62	90	193	35	45	159	56
16	74	41	68	41	92	62	184	110	40	35	199	58
17	78	33	64	45	90	63	132	66	45	35	159	54
18	78	32	61	46	81	56	94	54	55	187	133	70
19	77	34	62	33	82	50	88	56	60	63	170	89
20	73	32	71	33	84	89	134	62	55	284	202	78
21	72	45	65	174	76	80	401	72	52	362	318	65
22	67	32	58	942	79	88	270	99	52	315	311	74
23	69	45	55	732	86	146	156	104	50	315	164	102
24	69	50	54	549	83	149	71	100	52	231	109	195
25	63	55	54	478	77	144	75	94	52	237	148	226
26	63	58	54	324	73	132	162	88	55	260	147	298
27	63	59	55	282	70	100	122	85	55	254	153	249
28	63	44	53	245	67	95	117	80	55	244	181	224
29	63	49	53	199	---	77	167	74	56	163	182	201
30	61	30	54	107	---	63	177	70	58	66	161	178
31	57	---	55	122	---	68	---	66	---	68	139	---
TOTAL	2229	1365	1681	5100	2725	5594	3772	3554	1970	3807	4316	3490
MEAN	71.9	45.5	54.2	165	97.3	180	126	115	65.7	123	139	116
MAX	88	69	78	942	151	676	401	250	160	362	318	298
MIN	57	30	18	33	54	50	71	54	27	30	49	52

WTR YR 1989 TOTAL 39603 MEAN 109 MAX 942 MIN 18

ST. JOHNS RIVER

COASTAL AREA BETWEEN PONCE DE LEON INLET AND SEBASTIAN INLET

02250030 TURKEY CREEK AT PALM BAY, FL--Continued

GAGE HEIGHT, IN FEET ABOVE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.02	6.21	5.81	5.33	5.57	5.23	5.53	5.41	---	---	5.22	5.64
2	6.04	6.20	5.73	5.36	5.52	5.41	5.26	5.59	---	---	5.27	5.64
3	5.97	6.02	5.51	5.36	5.41	6.45	5.16	5.55	---	---	5.34	5.55
4	6.13	5.99	5.32	5.53	5.40	6.65	5.13	5.45	---	---	5.43	5.63
5	6.26	5.88	5.39	5.45	5.28	6.24	5.29	5.32	---	---	5.41	5.69
6	6.49	6.02	5.39	5.31	5.26	5.94	5.46	5.41	---	---	5.36	5.74
7	6.47	5.90	5.36	5.39	5.32	6.12	5.25	5.53	---	5.37	5.30	5.77
8	6.39	5.72	5.43	5.39	5.48	6.27	5.23	5.53	---	5.30	5.26	5.90
9	6.27	5.64	5.38	5.41	5.84	6.54	5.15	5.31	---	5.23	5.46	5.90
10	6.35	5.53	5.52	5.57	5.64	6.67	5.12	5.20	---	5.20	6.40	5.99
11	6.29	5.54	5.53	5.63	5.43	6.33	5.44	5.45	---	5.18	6.11	6.02
12	6.31	5.56	5.98	5.52	5.42	6.05	5.64	5.36	---	5.16	6.10	6.04
13	6.35	5.53	5.93	5.51	5.26	5.92	5.50	5.32	---	5.12	6.11	6.05
14	6.44	5.67	5.69	5.47	5.17	5.88	5.53	5.21	---	5.09	6.13	5.99
15	6.30	5.62	5.65	5.43	5.18	5.80	5.32	5.50	---	5.03	6.01	5.97
16	6.24	5.48	5.63	5.46	5.24	5.77	5.63	5.52	---	5.05	5.88	5.97
17	6.16	5.57	5.74	5.56	5.22	5.76	5.55	5.43	---	5.10	5.80	6.06
18	6.11	5.59	5.63	5.50	5.58	5.67	5.47	5.45	---	5.48	5.75	6.15
19	6.02	5.55	5.58	5.37	5.58	5.69	5.40	5.37	---	5.16	5.83	6.19
20	6.06	5.55	5.48	5.31	5.47	5.48	5.47	5.40	---	5.44	5.89	6.19
21	6.07	5.75	5.44	5.86	5.34	5.38	6.11	5.34	---	5.51	6.25	6.22
22	6.17	5.67	5.44	7.62	5.60	5.40	5.91	5.42	---	5.44	6.13	5.89
23	6.20	6.07	5.42	7.26	5.72	5.42	5.65	5.40	---	5.47	5.95	5.96
24	6.20	6.44	5.43	6.87	5.55	5.74	5.43	---	---	5.42	5.74	6.08
25	6.30	6.16	5.45	6.60	5.40	5.82	5.39	---	---	5.46	5.66	6.05
26	6.17	5.85	5.46	6.25	5.27	5.70	5.45	---	---	5.51	5.69	6.25
27	6.08	5.81	5.39	6.12	5.15	5.56	5.35	---	---	5.42	5.67	6.33
28	6.04	5.82	5.33	6.03	5.19	5.47	5.33	---	---	5.32	5.74	6.29
29	6.05	5.86	5.42	5.87	---	5.31	5.33	---	---	5.27	5.77	6.27
30	6.07	5.70	5.41	5.66	---	5.10	5.34	---	---	5.27	5.74	6.23
31	6.01	---	5.35	5.66	---	5.22	---	---	---	5.21	5.67	---
MEAN	6.19	5.80	5.52	5.76	5.41	5.81	5.43	---	---	---	5.74	5.99
MAX	6.49	6.44	5.98	7.62	5.84	6.67	6.11	---	---	---	6.40	6.33
MIN	5.97	5.48	5.32	5.31	5.15	5.10	5.12	---	---	---	5.22	5.55

CAL YR 1988 MEAN 5.65 MAX 8.24 MIN 5.08

ST. JOHNS RIVER

COASTAL AREA SEBASTIAN INLET TO ST. LUCIE RIVER

02251500 NORTH PRONG SEBASTIAN CREEK NEAR MICCO, FL

LOCATION.--Lat 27°51'21", long 80°31'28", in Fleming Land Grant, T.30 S., R.38 E., Brevard County, Hydrologic Unit 03080203, on right bank 15 ft downstream from bridge on Wildon Road, 1.9 mi upstream from mouth, and 2.2 mi southwest of Micco.

DRAINAGE AREA.--56.0 mi^2.

PERIOD OF RECORD.--January 1987 to current year.

GAGE.--Water-stage recorder. Datum of gage has not been determined.

REMARKS.--Records good.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 392 ft^3/s, Mar 14, 1988, gage height, 9.66 ft; minimum, 6.2 ft^3/s, June 20,21, 1989, gage height, 4.46 ft.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 90 ft^3/s, Mar. 4,5, gage height, 7.76 ft; minimum, 6.2 ft^3/s, June 20,21, gage height, 4.46 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	13	14	14	18	22	18	13	8.0	7.3	9.0	15
2	15	13	14	14	17	19	17	13	7.6	7.5	8.9	14
3	16	14	13	14	18	48	16	14	8.6	7.8	13	14
4	17	21	12	14	18	78	17	14	9.2	8.0	16	14
5	16	21	12	13	20	82	18	13	9.1	7.8	16	16
6	16	18	13	13	22	60	18	12	7.7	7.7	15	16
7	15	16	16	13	23	52	18	12	6.9	7.5	13	15
8	16	15	15	13	22	52	17	13	7.2	7.5	12	14
9	16	15	14	13	21	56	16	12	7.5	7.3	13	14
10	16	15	13	13	18	58	15	10	9.3	7.3	21	13
11	15	14	13	13	16	50	15	9.8	8.5	7.0	17	13
12	15	14	16	13	15	43	14	9.6	7.8	7.0	18	12
13	14	14	15	13	15	38	14	9.8	7.4	6.9	17	12
14	14	14	14	13	15	35	14	10	7.2	7.9	19	12
15	14	14	15	13	16	32	14	10	7.1	9.7	21	11
16	14	14	15	13	16	31	15	10	6.9	8.6	22	11
17	14	14	14	13	15	30	16	9.7	7.6	8.1	20	13
18	15	14	13	13	14	29	15	9.5	6.8	8.5	18	14
19	15	14	13	15	14	28	14	9.8	6.4	10	17	13
20	14	13	14	16	14	26	14	9.8	6.3	11	20	13
21	13	13	14	15	13	26	22	9.1	7.7	13	26	14
22	13	13	14	22	14	24	17	8.8	7.6	13	26	14
23	14	14	14	30	13	23	16	10	7.0	13	25	15
24	14	14	14	33	15	22	14	13	6.9	13	23	15
25	13	13	17	30	16	21	14	11	6.9	12	21	16
26	13	13	18	27	19	20	13	11	6.8	11	19	16
27	12	15	16	24	21	20	12	9.9	6.8	11	18	15
28	12	15	15	22	25	20	12	9.1	6.8	10	18	14
29	12	14	15	22	---	19	13	8.7	6.9	10	18	14
30	12	13	15	21	---	17	13	8.4	7.2	10	17	13
31	12	---	14	20	---	17	---	8.2	---	9.4	15	---
TOTAL	443	437	444	535	483	1098	461	331.2	223.7	285.8	551.9	415
MEAN	14.3	14.6	14.3	17.3	17.2	35.4	15.4	10.7	7.46	9.22	17.8	13.8
MAX	17	21	18	33	25	82	22	14	9.3	13	26	16
MIN	12	13	12	13	13	17	12	8.2	6.3	6.9	8.9	11
CFSM	.26	.26	.26	.31	.31	.63	.27	.19	.13	.16	.32	.25
IN.	.29	.29	.29	.36	.32	.73	.31	.22	.15	.19	.37	.28

CAL YR 1988 TOTAL 10390.6 MEAN 28.4 MAX 367 MIN 7.8 CFSM .51 IN. 6.90
WTR YR 1989 TOTAL 5708.6 MEAN 15.6 MAX 82 MIN 6.3 CFSM .28 IN. 3.79

ST JOHNS RIVER

COASTAL AREA SEBASTIAN INLET TO ST. LUCIE RIVER

02251800 INDIAN RIVER AT WABASSO, FL

LOCATION.--Lat 27°45'15", long 80°25'40;, in SW¼ sec.27, T.31 S., R.39 E., Indian River County, Hydrologic Unit 03080203, on north side near the southwest end of bridge on State Highway 510 at Wabasso.

PERIOD OF RECORD.--November 1940 to current year (gage heights only). Records of gage heights prior to October 1962 are unpublished and available in files of the Orlando Subdistrict office.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (Florida Department of Transportation bench mark). Prior to June 26, 1970, at site 0.9 mi northeast at same datum.

REMARKS.--Stage affected by tide. The stage record published is the maximum and minimum tide event for each calendar day.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 4.76 ft, Sept. 22, 1948; minimum, -1.36 ft, Jan. 20, 1946.

EXTREMES FOR CURRENT YEAR.--Maximum gage height recorded, 2.47 ft, Mar. 10; minimum recorded, -0.34 ft, July 17.

GAGE HEIGHT, IN FEET ABOVE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
TIDAL HIGH VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.08	1.68	---	---	.55	.32	.76	.35	.50	.94	.30	.72
2	1.11	1.54	---	---	.51	.55	.51	.55	.38	.88	.30	.73
3	1.00	1.13	---	---	.44	1.05	.19	.53	.26	.72	.49	.57
4	1.28	1.12	---	---	.32	.70	.20	.44	.16	.83	.71	.74
5	1.68	.95	---	---	.35	.65	.51	.25	.05	.80	.70	.80
6	2.04	1.08	---	---	.39	.51	.68	.41	-.06	.54	.50	.80
7	2.24	.96	---	---	.47	1.25	.33	.56	.17	.34	.44	.95
8	1.88	.88	---	---	.55	1.61	.43	.78	.25	.20	.29	1.21
9	1.55	.78	---	---	1.36	1.86	.31	.65	.15	.20	.75	.98
10	1.76	.70	---	---	1.19	2.47	.03	.12	.08	.18	.69	1.18
11	1.55	.76	---	---	.87	2.26	.67	.53	-.02	.20	.91	1.20
12	1.50	.98	---	---	.70	1.47	1.16	.60	-.02	.27	1.16	1.29
13	1.70	.81	---	---	.53	1.05	.74	.56	-.04	.27	.98	1.29
14	1.76	1.08	---	---	.09	.97	.71	.22	-.10	.10	1.07	1.21
15	1.59	.91	---	---	.14	.70	.40	.51	-.12	-.02	.93	1.17
16	1.47	.58	---	---	.26	.73	.69	.54	-.12	.17	.85	1.18
17	1.59	---	---	---	.26	.71	.59	.55	-.13	.18	.86	1.18
18	1.37	---	---	---	1.11	.65	.55	.56	-.01	.17	.80	1.34
19	1.13	---	---	---	1.15	.75	.50	.34	.08	.25	.79	1.53
20	1.39	---	---	---	.84	.58	.44	.51	.05	.28	.67	1.45
21	1.35	---	---	1.15	.42	.51	.97	.58	.06	.34	.95	1.68
22	1.47	---	---	1.41	.73	.45	1.24	.51	.17	.41	.80	1.03
23	1.58	---	---	1.88	1.01	.30	.89	.41	.15	.37	.76	.94
24	1.52	---	---	1.64	1.00	.81	.53	.32	.33	.47	.61	1.01
25	1.68	---	---	1.51	.75	.95	.32	.43	.37	.54	.60	1.01
26	1.40	---	---	.99	.47	.94	.34	.41	.45	.68	.77	1.06
27	1.20	---	---	.91	.32	.61	.34	.33	.49	.53	.72	1.24
28	1.17	---	---	.93	.25	.47	.40	.26	.35	.34	.76	1.25
29	1.21	---	---	.75	---	.29	.31	.49	.49	.39	.86	1.16
30	1.35	---	---	.67	---	.05	.41	.51	.66	.33	.75	1.06
31	1.26	---	---	.62	---	.18	---	.53	---	.25	.71	---
MEAN	1.48	---	---	---	.61	.85	.54	.46	.17	.39	.73	1.10
MAX	2.24	---	---	---	1.36	2.47	1.24	.78	.66	.94	1.16	1.68
MIN	1.00	---	---	---	.09	.05	.03	.12	-.13	-.02	.29	.57

COASTAL AREA SEBASTIAN INLET TO ST. LUCIE RIVER

02251800 INDIAN RIVER AT WABASSO, FL--Continued

GAGE HEIGHT, IN FEET ABOVE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
TIDAL LOW VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.60	1.06	---	---	.08	-.09	-.04	-.28	.01	.23	-.20	.18
2	.69	1.06	---	---	-.06	.07	-.01	-.24	-.08	.27	-.13	.18
3	.46	.63	---	---	-.14	.22	-.01	.00	-.11	.29	.04	.07
4	.73	.49	---	---	-.30	.10	.01	-.11	-.16	.30	.21	.26
5	.93	.32	---	---	-.28	-.04	-.02	-.27	-.11	.08	.14	.28
6	1.31	.72	---	---	-.31	-.05	.04	-.08	-.11	-.24	-.04	.40
7	1.36	.53	---	---	-.16	.09	.10	.16	-.11	-.25	-.14	.45
8	1.19	.39	---	---	-.07	.86	.10	.18	-.11	-.23	-.06	.71
9	1.09	.30	---	---	.66	1.28	.00	-.23	-.11	-.23	-.02	.53
10	1.19	.15	---	---	.58	1.73	-.01	-.22	-.11	-.20	.22	.65
11	.93	.21	---	---	.03	1.12	.06	.14	-.11	-.15	.38	.77
12	1.06	.27	---	---	.33	.50	.73	.01	-.11	-.17	.41	.72
13	.99	.23	---	---	-.08	.42	.25	-.12	-.12	-.29	.48	.75
14	1.19	.39	---	---	-.21	.16	.20	-.17	-.12	-.30	.35	.63
15	.94	.29	---	---	-.21	.39	.13	-.14	-.12	-.30	.41	.52
16	.88	.15	---	---	-.20	.14	.14	.10	-.13	-.30	.39	.44
17	.90	---	---	---	-.20	.23	.17	.03	-.13	-.34	.32	.62
18	.80	---	---	---	-.02	.10	.17	.05	-.13	-.30	.21	.71
19	.75	---	---	---	.57	.12	.12	-.08	-.12	-.31	.27	.79
20	.76	---	---	---	.20	.03	.12	.07	-.12	-.28	.10	.75
21	.77	---	---	.34	-.07	.06	.17	-.14	-.11	-.20	.35	1.11
22	.85	---	---	.39	.08	.02	.37	-.12	-.10	-.24	.31	.64
23	.92	---	---	1.01	.57	-.03	.15	-.12	-.11	-.05	.26	.38
24	.86	---	---	1.14	.32	.37	.14	-.12	-.07	.00	.20	.47
25	.83	---	---	.72	.06	.55	-.14	-.08	-.10	.10	.11	.46
26	.77	---	---	.40	-.07	.17	.10	-.09	-.05	.16	.26	.50
27	.66	---	---	.51	-.07	.08	-.19	.00	.01	.09	.30	.80
28	.62	---	---	.47	-.06	-.03	-.23	-.11	-.08	-.07	.28	.66
29	.63	---	---	.16	---	-.04	.01	-.12	-.07	-.15	.31	.68
30	.69	---	---	.20	---	-.05	-.13	.02	.00	-.10	.36	.53
31	.63	---	---	.37	---	-.05	---	.03	---	-.25	.26	---
MEAN	.87	---	---	---	.03	.27	.08	-.07	-.10	-.11	.20	.55
MAX	1.36	---	---	---	.66	1.73	.73	.18	.01	.30	.48	1.11
MIN	.46	---	---	---	-.31	-.09	-.23	-.28	-.16	-.34	-.20	.07

ST. JOHNS RIVER

COASTAL AREA SEBASTIAN INLET TO ST. LUCIE RIVER

02252500 NORTH CANAL NEAR VERO BEACH, FL

LOCATION.--Lat 27°41'32", long 80°25'00", in SE¼ sec.15, T.32 S., R.39 E., Indian River County, Hydrologic Unit 03080203, on left bank 600 ft upstream from bridge on State Highway 605, and 3.9 mi north of Vero Beach.

DRAINAGE AREA.--Indeterminate.

PERIOD OF RECORD.--November 1950 to current year.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929. Prior to Feb. 27, 1952, at site 50 ft downstream at datum 0.81 ft lower. Feb. 27, 1952 to Nov. 5, 1957, at bridge 600 ft downstream at present datum.

REMARKS.--Records good. Considerable pumping into canal for drainage above station. Since Sept. 7, 1954, low flow regulated by control structure 2 mi upstream.

AVERAGE DISCHARGE.--38 years (water years 1952-89), 31.2 ft^3/s, 22,600 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,790 ft^3/s, Sept. 23, 1960; maximum gage height, 11.78 ft, June 18, 1959; no flow part of each day Mar. 7,8, 1969; minimum gage height observed, 0.92 ft, June 22, 1956, site then in use.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 380 ft/^{3}s, Mar. 3, gage height, 6.41 ft; minimum, 1.4 ft^3/s, Sept. 9; minimum gage height, 1.29 ft, Oct. 14,15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	14	6.7	11	15	17	8.9	13	10	13	11	3.9
2	19	16	9.9	9.8	13	22	7.7	8.9	7.3	15	9.9	19
3	18	13	11	9.3	15	176	11	6.2	6.1	15	10	12
4	18	141	11	7.9	16	61	16	6.3	7.6	16	11	21
5	17	51	8.7	9.9	15	9.8	16	7.2	6.6	15	11	71
6	22	6.8	76	9.4	14	9.6	16	8.8	5.3	15	11	12
7	19	6.7	35	14	12	121	15	9.5	5.7	11	9.5	2.5
8	16	5.6	6.3	14	11	103	12	8.7	15	7.6	7.8	2.4
9	13	6.4	6.1	14	11	47	11	7.2	24	5.9	7.5	2.1
10	14	10	6.7	11	14	23	11	7.9	45	6.1	8.2	6.2
11	14	12	6.8	9.9	13	21	7.9	7.5	18	5.6	18	11
12	6.7	14	12	9.4	13	15	6.9	6.6	14	5.6	21	12
13	6.1	14	17	12	13	14	9.8	5.9	15	6.2	26	13
14	6.2	13	16	13	11	17	8.3	6.8	15	11	17	15
15	6.1	9.2	16	13	8.3	18	10	23	14	31	17	18
16	12	11	14	11	8.4	19	14	20	11	24	23	20
17	22	9.7	13	8.5	10	19	15	15	12	26	23	48
18	32	8.5	12	8.3	16	18	16	11	9.6	111	132	44
19	27	14	12	8.7	15	17	15	10	9.3	48	47	50
20	24	13	9.6	13	12	16	12	9.8	8.1	44	24	14
21	21	14	9.4	36	13	15	13	9.1	7.1	33	21	5.4
22	21	75	8.5	153	23	14	8.2	6.7	9.2	27	6.4	3.6
23	21	48	8.9	51	21	14	6.7	7.7	12	24	5.4	4.9
24	19	16	10	13	8.4	15	5.9	11	16	20	7.0	16
25	15	7.1	12	10	14	14	6.0	13	27	15	13	16
26	13	6.1	12	13	37	14	6.4	11	19	13	16	5.5
27	11	6.0	11	16	29	13	6.4	11	14	13	16	5.8
28	9.9	5.6	10	17	23	14	6.6	11	11	12	14	3.9
29	13	4.9	9.4	17	---	13	7.1	12	10	11	13	4.1
30	15	4.9	9.7	16	---	13	14	12	10	12	9.6	4.0
31	15	---	11	16	---	12	---	11	---	12	5.5	---
TOTAL	504.0	576.5	417.7	575.1	424.1	914.4	319.8	314.8	393.9	624.0	571.8	466.3
MEAN	16.3	19.2	13.5	18.6	15.1	29.5	10.7	10.2	13.1	20.1	18.4	15.5
MAX	32	141	76	153	37	176	16	23	45	111	132	71
MIN	6.1	4.9	6.1	7.9	8.3	9.6	5.9	5.9	5.3	5.6	5.4	2.1
AC-FT	1000	1140	829	1140	841	1810	634	624	781	1240	1130	925

CAL YR 1988 TOTAL 8432.6 MEAN 23.0 MAX 257 MIN 4.9 AC-FT 16730
WTR YR 1989 TOTAL 6102.4 MEAN 16.7 MAX 176 MIN 2.1 AC-FT 12100

ST. JOHNS RIVER

COASTAL AREA SEBASTIAN INLET TO ST. LUCIE RIVER

02253000 MAIN CANAL AT VERO BEACH, FL
(National stream-quality accounting network station)

LOCATION.--Lat 27°38'54", long 80°24'10", in SE¼ sec.35, T.32 S., R.39 E., Indian River County, Hydrologic Unit 03080203, on right bank 8 ft upstream from dam, 700 ft upstream from U.S. Highway 1, and 0.6 mi northwest of Vero Beach.

DRAINAGE AREA.--Indeterminate.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--January 1949 to current year. Monthly discharge only for some periods, published in WSP 1724.

GAGE.--Water-stage recorder and concrete dam. Datum of gage is National Geodetic Vertical Datum of 1929. Prior to Mar. 20, 1952, at datum 0.74 ft lower. Mar. 20, 1952, to Sept. 30, 1956, at datum 0.02 ft lower.

REMARKS.--Records good. Considerable pumping into canal for drainage upstream from station. Since Aug. 6, 1954, low flow regulated by control structure 1.5 mi upstream.

AVERAGE DISCHARGE.--40 years (water years 1950-89), 76.6 ft^3/s, 55,500 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,900 ft^3/s, Sept. 23, 1960, gage height, 14.21 ft; maximum gage height, 14.38 ft, Sept. 24, 1963; no flow at times in some years; minimum gage height, 7.87 ft, July 9,10, 1989.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 930 ft^3/s, Sept. 3, gage height, 12.08 ft; minimum daily discharge, 0.07 ft^3/s, July 9; minimum gage height, 7.87 ft, July 9,10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBFR 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	32	27	11	28	25	39	19	306	17	31	26	19
2	35	20	18	23	23	188	19	73	12	35	32	411
3	39	13	19	22	24	452	23	1.4	7.7	41	35	286
4	45	303	18	20	27	129	23	9.1	10	44	32	514
5	40	167	21	24	26	2.6	32	17	13	44	30	262
6	40	38	220	24	25	4.9	36	21	6.4	244	26	128
7	34	1.7	40	22	18	278	35	21	16	175	14	40
8	26	1.9	2.6	31	15	249	30	20	34	1.1	7.4	1.9
9	23	10	2.8	37	25	86	25	20	48	.07	16	17
10	27	19	3.3	33	25	203	22	16	293	1.4	28	49
11	26	21	6.7	24	23	60	17	10	10	7.2	38	49
12	16	21	22	33	25	2.8	14	17	16	4.6	41	47
13	10	22	29	43	30	15	14	14	19	2.4	262	43
14	7.0	22	29	40	30	25	17	14	20	13	23	38
15	13	22	29	37	23	29	24	28	21	33	40	35
16	26	21	27	34	20	31	32	34	17	35	213	67
17	41	15	25	29	20	31	34	23	9.6	49	182	91
18	175	19	24	25	20	31	46	23	9.3	192	356	71
19	32	26	25	29	22	29	31	22	12	63	222	481
20	31	22	24	33	21	28	212	20	11	58	183	243
21	27	26	19	34	27	22	298	16	14	44	281	56
22	24	221	21	308	40	22	41	14	15	40	107	3.3
23	23	95	23	58	31	25	1.3	18	20	36	3.1	89
24	21	24	26	3.8	4.5	27	1.3	25	28	33	25	261
25	17	2.5	26	4.8	24	26	3.6	28	33	31	39	268
26	16	2.7	27	18	74	24	11	22	25	32	40	222
27	14	2.7	27	24	61	27	15	23	21	35	40	175
28	12	2.9	28	25	47	28	11	23	16	35	37	47
29	14	3.6	21	26	---	22	16	21	17	31	36	2.9
30	16	4.2	17	26	---	24	296	21	25	32	32	7.1
31	26	---	23	25	---	22	---	17	---	31	25	---
TOTAL	928.0	1196.2	854.4	1143.6	775.5	2182.3	1399.2	937.5	816.0	1453.77	2471.5	4024.2
MEAN	29.9	39.9	27.6	36.9	27.7	70.4	46.6	30.2	27.2	46.9	79.7	134
MAX	175	303	220	308	74	452	298	306	293	244	356	514
MIN	7.0	1.7	2.6	3.8	4.5	2.6	1.3	1.4	6.4	.07	3.1	1.9
AC-FT	1840	2370	1690	2270	1540	4330	2780	1860	1620	2880	4900	7980

CAL YR 1988 TOTAL 19032.8 MEAN 52.0 MAX 487 MIN 1.7 AC-FT 37750
WTR YR 1989 TOTAL 18182.17 MEAN 49.8 MAX 514 MIN .07 AC-FT 36050

02253000 MAIN CANAL AT VERO BEACH, FL--Continued
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1954 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: March 1975 to October 1981.
WATER TEMPERATURE: March 1975 to October 1981.

INSTRUMENTATION.--Water-quality monitor March 1975 to October 1981.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily mean (more than 20 percent missing record), 2,370 micromsiemens, July 17, 1981; minimum daily mean, 284 microsiemens, Sept. 4, 1979.
WATER TEMPERATURES: Maximum daily mean, 36.0°C, July 21, 1979; minimum daily mean, 12.5°C, Dec. 28, 1976.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	GAGE HEIGHT (FEET) (00065)	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	OXYGEN, DIS-SOLVED (MG/L) (00300)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	COLI-STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	STREP- HARD-NESS TOTAL (MG/L AS CACO3) (00900)
DEC										
07...	1245	8.23	5.7	1390	7.6	18.5	5.6	--	--	400
MAR										
14...	1830	8.54	26	1560	6.6	22.5	7.7	E22	E33	430
APR										
10...	1823	8.47	21	1870	7.8	26.5	7.6	E47	E3	430
MAY										
03...	1836	8.07	1.3	2040	7.8	30.5	7.5	E30	E2	470
JUL										
19...	0843	8.85	64	1490	7.4	27.5	2.8	85	E5	330
SEP										
06...	1211	9.28	130	1270	7.5	28.0	1.6	240	15	320

DATE	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)
DEC										
07...	110	31	160	7.0	--	99	330	0.40	12	938
MAR										
14...	120	30	140	8.5	199	130	310	0.40	9.9	944
APR										
10...	110	38	180	8.5	173	120	420	0.40	4.0	1090
MAY										
03...	110	46	220	7.8	151	110	490	0.50	9.6	1170
JUL										
19...	80	30	150	11	126	100	280	0.30	12	837
SEP										
06...	85	25	120	11	145	89	250	0.40	13	721

DATE	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS-PHOROUS TOTAL (MG/L AS P) (00665)	PHOS-PHOROUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHOROUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)	SEDI-MENT, SUS-PENDED (MG/L) (80154)
DEC										
07...	0.020	0.220	0.190	0.210	0.70	0.100	0.080	0.070	100	3
MAR										
14...	0.070	0.940	0.190	0.170	1.0	0.130	0.100	0.100	100	1
APR										
10...	<0.010	<0.100	0.020	0.030	0.80	0.120	0.090	0.030	67	3
MAY										
03...	<0.010	<0.100	0.030	0.050	0.50	0.210	0.170	0.150	--	--
JUL										
19...	0.040	0.600	0.150	0.160	0.70	0.200	0.180	0.190	--	--
SEP										
06...	0.080	0.350	0.460	0.470	1.5	0.380	0.230	0.190	--	--

ST. JOHNS RIVER

COASTAL AREA SEBASTIAN INLET TO ST. LUCIE RIVER

02253000 MAIN CANAL AT VERO BEACH, FL--Continued
(National stream-quality accounting network station)

WATER-QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	ALUMINUM, DISSOLVED (UG/L AS AL) (01106)	ARSENIC DISSOLVED (UG/L AS AS) (01000)	BARIUM, DISSOLVED (UG/L AS BA) (01005)	BERYLLIUM, DISSOLVED (UG/L AS BE) (01010)	CADMIUM DISSOLVED (UG/L AS CD) (01025)	CHROMIUM, DISSOLVED (UG/L AS CR) (01030)	COBALT, DISSOLVED (UG/L AS CO) (01035)	COPPER, DISSOLVED (UG/L AS CU) (01040)	LEAD, DISSOLVED (UG/L AS PB) (01049)	LITHIUM DISSOLVED (UG/L AS LI) (01130)
MAR										
14...	<10	1	43	<0.5	<1	1	<3	7	<5	17
MAY										
03...	20	<1	<100	<10	<1	<1	<1	5	4	10
JUL										
19...	20	1	42	<0.5	2	<1	<3	12	<1	9
SEP										
06...	30	1	36	<0.5	2	2	<3	14	5	10

DATE	MANGANESE, DISSOLVED (UG/L AS MN) (01056)	MERCURY DISSOLVED (UG/L AS HG) (71890)	MOLYBDENUM, DISSOLVED (UG/L AS MO) (01060)	NICKEL, DISSOLVED (UG/L AS NI) (01065)	SELENIUM, DISSOLVED (UG/L AS SE) (01145)	SILVER, DISSOLVED (UG/L AS AG) (01075)	STRONTIUM, DISSOLVED (UG/L AS SR) (01080)	VANADIUM, DISSOLVED (UG/L AS V) (01085)	ZINC, DISSOLVED (UG/L AS ZN) (01090)
MAR									
14...	20	<0.1	<10	3	<1	<1.0	4100	<6	12
MAY									
03...	10	1.2	1	<1	<1	4.0	6300	11	10
30...	10	1.2	1	<1	<1	4.0	6300	11	10
JUL									
19...	28	<0.1	<10	<1	<1	<1.0	4900	<6	25
SEP									
06...	85	<0.1	20	1	<1	<1.0	3900	<6	25

ST. JOHNS RIVER

COASTAL AREA SEBASTIAN INLET TO ST. LUCIE RIVER

02253500 SOUTH CANAL NEAR VERO BEACH, FL

LOCATION.--Lat 27°36'11", long 80°23'24", in SW¼ sec.13, T.33 S., T.39 E., Indian River County, Hydrologic Unit 03080203, on right bank 1,000 ft upstream from bridge on State Highway 605, and 2.5 mi south of Vero Beach.

DRAINAGE AREA.--Indeterminate.

PERIOD OF RECORD.--October 1950 to current year.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929. Prior to Feb. 28, 1952, at downstream side of bridge 1,000 ft downstream at datum 1.26 ft lower. Feb. 28, 1952, to Nov. 6, 1957, 20 ft upstream from bridge at datum 0.46 ft lower.

REMARKS.--Records fair. Considerable pumping into canal for drainage above station. Since Jan. 6, 1956, low flow regulated by control structure upstream.

AVERAGE DISCHARGE.--39 years, 39.4 ft^3/s, 28,540 acre-ft/yr.

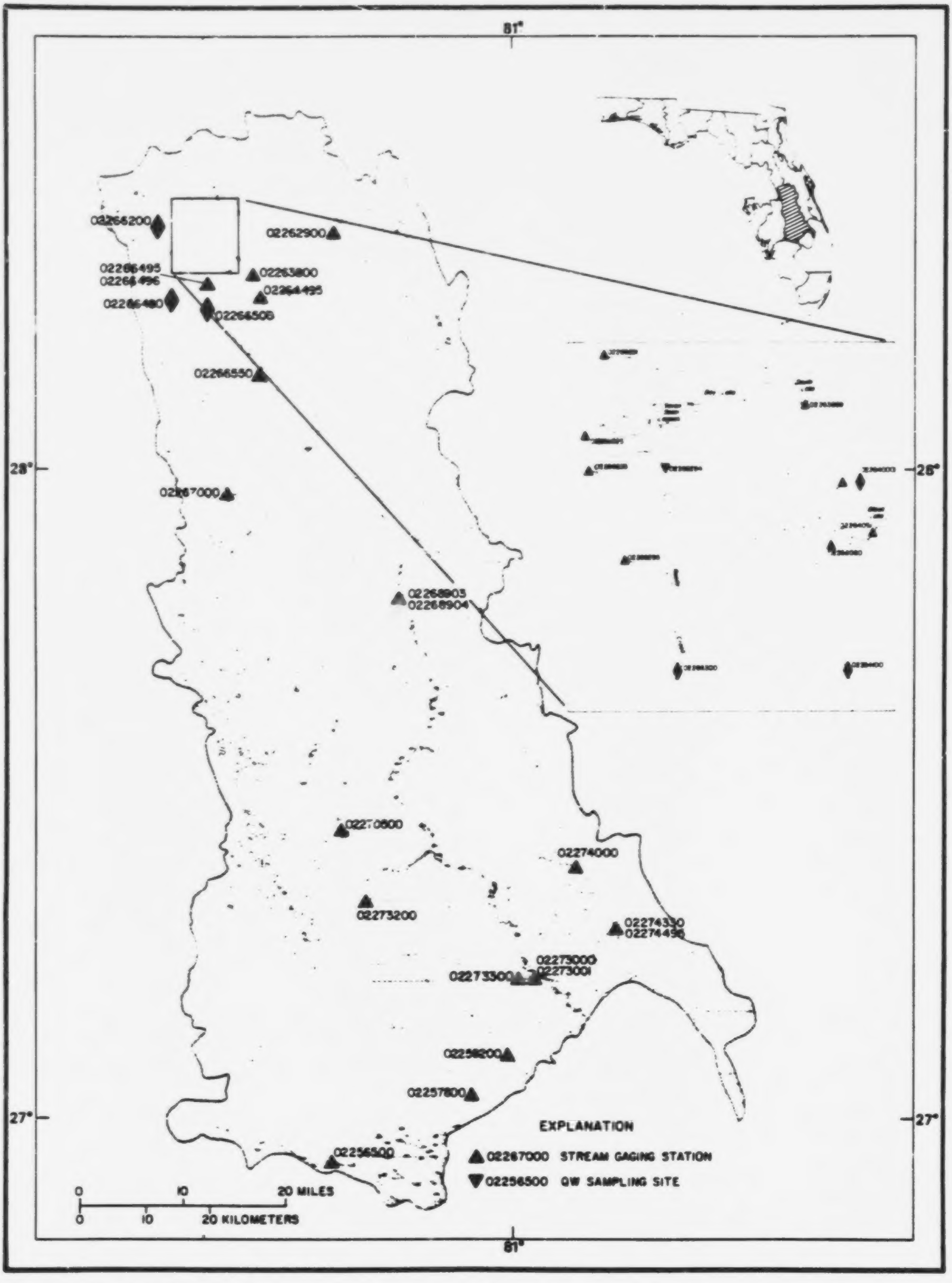
EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,930 ft^3/s, Sept. 24, 1963, gage height, 10.97 ft, from floodmarks; maximum gage height, 10.98 ft, Aug. 27, 1964; minimum discharge, 0.43 ft^3/s, May 24, 1978; minimum gage height, 0.56 ft, Sept. 1, 1989.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 715 ft^3/s, Aug. 18, gage height, 8.21 ft; minimum daily discharge, 2.4 ft^3/s, Aug. 8; minimum gage height, 0.56 ft, Sept. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	20	11	12	13	17	14	11	4.7	15	4.5	5.9
2	19	19	12	15	11	35	9.9	5.7	4.1	16	6.0	51
3	22	9.9	11	12	11	323	8.6	5.0	3.7	19	8.1	103
4	26	311	11	11	12	107	8.1	5.2	3.7	29	7.7	148
5	22	158	172	12	12	12	15	6.1	4.0	21	6.5	110
6	26	46	24	15	11	10	19	7.7	3.8	30	4.7	61
7	27	15	12	11	7.4	193	16	7.7	4.8	3.1	2.6	28
8	29	13	11	11	6.1	154	13	7.7	24	2.7	2.4	18
9	26	13	11	19	12	81	9.4	6.9	26	2.7	3.4	21
10	25	16	14	20	15	38	7.7	5.0	45	2.8	9.5	31
11	21	16	29	17	10	36	5.6	5.1	4.7	2.8	18	32
12	14	16	27	16	9.8	20	7.4	7.1	5.9	2.6	19	31
13	13	16	22	22	13	15	6.6	5.9	6.7	2.8	32	29
14	18	16	20	23	13	18	8.7	4.7	6.8	3.0	11	26
15	16	15	20	19	8.3	18	11	10	5.7	17	21	23
16	17	12	18	16	7.7	19	17	13	4.1	18	39	34
17	24	9.4	18	14	7.8	19	18	7.7	2.7	27	38	43
18	28	12	18	11	8.8	17	24	6.4	3.0	47	281	38
19	18	12	18	14	13	17	26	5.4	4.4	43	105	45
20	19	11	19	16	11	15	32	5.2	4.8	40	117	23
21	19	15	19	20	9.7	11	183	4.4	6.0	26	170	29
22	21	165	17	244	18	11	48	3.9	5.0	20	48	17
23	21	48	11	63	16	14	7.8	4.2	7.0	16	7.2	12
24	18	20	15	25	5.7	15	6.0	8.5	10	13	9.9	13
25	18	12	14	16	19	14	5.2	8.5	15	11	14	14
26	16	9.2	15	13	44	12	5.8	5.6	10	12	15	16
27	10	8.2	15	15	34	15	6.3	6.5	7.9	14	15	18
28	8.5	8.5	15	15	23	14	5.2	6.4	4.3	13	14	18
29	8.6	8.4	15	15	---	10	9.2	6.7	4.7	7.8	13	20
30	10	8.9	13	15	---	10	38	5.5	11	8.0	11	16
31	17	---	9.4	14	---	12	---	4.8	---	6.6	8.5	---
TOTAL	594.1	1059.5	656.4	761	382.3	1302	591.5	203.5	253.5	491.9	1062.0	1073.9
MEAN	19.2	35.3	21.2	24.5	13.7	42.0	19.7	6.56	8.45	15.9	34.3	35.8
MAX	29	311	172	244	44	323	183	13	45	47	281	148
MIN	8.5	8.2	9.4	11	5.7	10	5.2	3.9	2.7	2.6	2.4	5.9
AC-FT	1180	2100	1300	1510	758	2580	1170	404	503	976	2110	2130

CAL YR 1988 TOTAL 10800.1 MEAN 29.5 MAX 375 MIN 5.5 AC-FT 21420
WTR YR 1989 TOTAL 8431.6 MEAN 23.1 MAX 323 MIN 2.4 AC-FT 16720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02257800
02256500
EXPLANATION
▲ 02267000 STREAM GAGING STATION
▼ 02256500 QW SAMPLING SITE
0 10 20 MILES
0 10 20 KILOMETERS

Figure 20.--Location of stream gaging stations in the Kissimmee River basin, the Taylor Creek basin and inflow to Lake Okeechobee from the north, and Fisheating Creek basin and inflow to Lake Okeechobee from the northwest.

FISHEATING CREEK BASIN AND INFLOW TO LAKE OKEECHOBEE FROM NORTHWEST

02256500 FISHEATING CREEK AT PALMDALE, FL
(National stream-quality accounting network station)

LOCATION.--Lat 26°55'56", long 81°18'54" in SW¼ sec.3, T.41 S., R.30 E., Glades County, Hydrologic Unit 03090103, near right bank on downstream side of southbound bridge on U.S. Highway 27, 1.0 mi south of Palmdale, and 16 mi upstream from Lake Okeechobee.

DRAINAGE AREA.--311 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1931 to current year.

GAGE.--Water-stage recorder. Datum of gage is 27.19 ft above National Geodetic Vertical Datum of 1929. Prior to Mar. 16, 1949, nonrecording gage and Mar 16, 1949, to Jan. 23, 1956, water-stage recorder, at site 450 ft upstream at same datum.

REMARKS.--Records fair.

AVERAGE DISCHARGE.--58 years, 251 ft^3/s, 10.96 in/yr, 181,800 acre-ft/yr

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 31,400 ft^3/s, Oct. 3, 1951, gage height, 12.44 ft, from rating curve extended above 21,000 ft^3/s; no flow at times in most years; minimum gage height observed, -0.61 ft, June 13, 1950.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,500 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Aug. 19	1800	*1,100	*5.92				

No flow May 19 to July 2; minimum gage height, 0.39 ft, June 27.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23	.75	13	11	21	1.0	2.3	5.6	.00	.00	44	216
2	21	.67	13	10	18	1.2	1.9	4.5	.00	.00	52	201
3	21	.70	12	9.6	15	4.3	1.7	3.5	.00	.02	68	185
4	25	23	11	9.4	13	11	1.4	2.7	.00	2.3	84	163
5	27	61	10	9.4	12	11	1.3	2.0	.00	17	119	141
6	29	59	9.5	8.9	11	12	1.0	1.5	.00	34	207	123
7	29	55	8.9	8.4	9.6	15	.86	1.0	.00	50	335	116
8	27	56	8.3	8.0	8.7	24	.71	.77	.00	59	375	132
9	24	58	7.7	7.6	7.9	34	.59	.56	.00	65	370	179
10	21	60	7.2	7.2	7.3	46	.50	.42	.00	70	362	230
11	17	58	7.1	6.9	6.8	58	.44	.33	.00	73	374	242
12	15	53	21	6.5	6.2	65	.43	.27	.00	74	394	235
13	13	46	37	5.9	5.6	66	.43	.21	.00	74	451	231
14	11	39	39	6.0	5.0	63	.62	.16	.00	71	494	228
15	9.2	33	40	5.6	4.4	56	1.8	.13	.00	62	514	234
16	8.2	28	43	5.4	3.8	49	2.5	.10	.00	54	597	234
17	7.8	23	46	5.1	3.3	40	3.2	.07	.00	47	766	197
18	6.9	20	47	4.7	2.9	31	3.9	.03	.00	44	953	173
19	6.0	18	44	4.4	2.6	24	4.5	.00	.00	41	1070	167
20	5.1	16	40	4.1	2.3	19	4.7	.00	.00	36	1030	139
21	4.4	14	35	4.0	2.1	15	4.8	.00	.00	30	923	115
22	3.7	13	31	5.5	1.9	12	6.1	.00	.00	27	824	96
23	3.0	13	27	7.7	1.7	10	9.1	.00	.00	24	688	87
24	2.4	14	24	8.9	1.6	8.8	13	.00	.00	24	592	82
25	2.0	13	21	11	1.5	7.5	14	.00	.00	33	543	130
26	1.6	12	19	16	1.4	6.4	13	.00	.00	45	495	181
27	1.3	12	17	23	1.3	5.4	12	.00	.00	52	463	192
28	1.0	11	15	29	1.1	4.5	9.8	.00	.00	55	435	234
29	.87	11	14	31	---	3.6	8.1	.00	.00	55	358	283
30	.79	11	13	29	---	3.1	6.7	.00	.00	52	302	342
31	.85	---	12	25	---	2.6	---	.00	---	47	254	---
TOTAL	368.11	832.12	692.7	334.2	179.0	709.4	131.38	23.85	0.00	1317.32	14536	5508
MEAN	11.9	27.7	22.3	10.8	6.39	22.9	4.38	.77	.00	42.5	469	184
MAX	29	61	47	31	21	66	14	5.6	.00	74	1070	342
MIN	.79	.67	7.1	4.0	1.1	1.0	.43	.00	.00	.00	44	82
AC-FT	730	1650	1370	663	355	1410	261	47	.0	2610	28830	10930
CFSM	.04	.09	.07	.03	.02	.07	.01	.00	.00	.14	1.51	.59
IN.	.04	.10	.08	.04	.02	.08	.02	.00	.00	.16	1.74	.66

CAL YR 1988 TOTAL 40015.48 MEAN 109 MAX 821 MIN .00 AC-FT 79370 CFSM .35 IN. 4.79
WTR YR 1989 TOTAL 24632.08 MEAN 67.5 MAX 1070 MIN .00 AC-FT 48860 CFSM .22 IN. 2.95

FISHEATING CREEK BASIN AND INFLOW TO LAKE OKEECHOBEE FROM NORTHWEST

02256500 FISHEATING CREEK AT PALMDALE, FL--Continued
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1964 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: July 1964 to September 1975, January 1978 to current year.
WATER TEMPERATURE: July 1964 to September 1975, January 1978 to current year.

INSTRUMENTATION.--Water-quality monitor since October 1980. Digital recorder set for 60-minute interval.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum observed (more than 20 percent missing record), 1,590 microsiemens, June 5, 1975; minimum observed, 38 microsiemens, Mar. 21, 1970.
WATER TEMPERATURE: Maximum observed, 33.0°C, June 21, 1973, June 16,17,23,24, 1987; minimum observed, 8.0°C, Jan. 8, 1970.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily mean (more than 20 percent missing record), 607 microsiemens, June 5,6; minimum daily mean, 92 microsiemens, Aug. 22.
WATER TEMPERATURE: Maximum daily mean (more than 20 percent missing record), 30.4°C, June 12,17; minimum daily mean, 14.3°C, Feb. 25.

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	165	254	---	---	500	415	333	424	537	---	304	130
2	163	250	---	---	502	405	324	428	554	---	296	132
3	159	261	---	---	507	356	326	422	565	---	281	134
4	162	231	---	---	499	327	328	435	588	---	253	133
5	164	172	---	---	484	315	328	437	607	---	220	137
6	165	201	---	---	475	319	328	434	607	---	194	143
7	170	208	274	---	444	328	326	453	585	---	199	149
8	177	226	---	---	437	306	325	459	595	---	209	151
9	187	235	---	---	428	303	315	484	591	---	210	152
10	194	306	---	325	432	314	306	492	590	---	206	150
11	201	369	---	---	453	342	306	491	581	---	189	148
12	211	395	---	---	438	418	310	492	589	---	174	147
13	213	391	---	---	431	421	307	498	594	---	152	146
14	224	342	---	---	437	416	315	502	595	---	131	146
15	221	325	---	---	426	356	323	505	593	---	122	147
16	233	---	---	---	422	313	319	511	593	---	123	142
17	242	423	---	338	435	315	315	516	595	---	128	149
18	234	---	---	337	419	327	312	520	587	290	137	154
19	241	---	---	332	418	330	305	520	589	278	139	154
20	246	---	---	326	419	326	287	523	580	275	115	159
21	247	---	---	333	426	323	243	528	585	270	99	165
22	245	310	---	333	420	320	222	525	591	270	92	170
23	246	322	---	329	411	320	226	530	---	273	98	193
24	248	---	---	325	429	321	293	532	---	271	102	177
25	254	---	---	320	435	318	315	511	---	266	113	157
26	248	---	---	324	423	318	324	507	---	269	106	137
27	258	---	---	332	421	320	312	512	---	280	111	145
28	250	284	---	385	425	321	356	518	---	298	109	143
29	253	---	---	417	---	322	403	522	---	312	118	137
30	258	242	---	454	---	322	419	523	---	319	123	136
31	---	---	---	487	---	327	---	523	---	313	126	---
MEAN	---	---	---	---	443	338	315	493	---	---	161	149
MAX	---	---	---	---	507	421	419	532	---	---	304	193
MIN	---	---	---	---	411	303	222	422	---	---	92	130

02256500 FISHEATING CREEK AT PALMDALE, FL--Continued
(National stream-quality accounting network station)

TEMPERATURE, WATER (DEG C), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26.8	22.6	23.4	---	22.3	20.7	25.2	26.3	29.4	---	---	24.1
2	26.5	21.6	21.0	---	23.3	22.0	23.2	26.9	28.9	---	---	23.9
3	27.0	20.4	---	---	23.7	21.9	24.1	25.3	28.8	---	---	23.1
4	26.2	21.3	20.9	---	24.8	22.9	25.4	23.9	29.6	---	---	22.9
5	25.9	22.0	---	---	25.3	24.3	25.1	24.6	28.8	---	---	24.1
6	25.3	22.5	21.6	---	25.7	24.4	25.0	25.0	29.2	---	---	28.2
7	24.8	21.2	19.0	---	26.1	21.1	23.0	23.8	---	---	---	28.7
8	24.1	---	21.6	---	26.1	18.4	23.3	21.4	29.1	---	---	28.8
9	23.1	23.3	---	---	24.7	16.0	24.4	22.5	29.6	---	---	28.7
10	22.9	23.3	---	21.0	21.8	15.3	26.4	25.0	28.9	---	---	28.7
11	22.6	24.1	---	---	20.9	16.0	26.4	23.0	30.2	---	---	28.5
12	22.1	24.5	---	---	20.4	16.5	24.9	21.4	30.4	---	---	28.5
13	22.4	24.8	---	---	20.5	18.0	26.0	23.5	29.7	---	---	28.5
14	21.9	25.4	---	---	21.7	20.1	25.8	23.1	29.7	---	---	28.4
15	20.5	25.1	---	---	22.3	21.0	25.6	25.7	30.0	---	---	28.5
16	20.3	25.7	---	---	22.8	20.9	26.7	25.8	30.3	---	---	27.6
17	22.0	27.1	---	24.4	23.0	22.2	25.9	26.6	30.4	---	---	28.2
18	22.4	26.9	---	24.3	24.3	24.8	26.5	26.5	29.5	28.0	---	27.9
19	23.3	26.6	---	23.7	24.9	25.1	27.7	24.1	28.9	---	---	27.4
20	23.9	26.7	---	24.0	24.8	25.1	26.2	24.9	27.5	---	---	27.5
21	23.7	27.1	---	22.8	25.3	24.9	26.0	25.2	27.1	---	---	28.1
22	22.8	27.3	---	22.4	25.9	25.2	25.5	25.1	27.0	---	---	27.7
23	21.7	24.5	---	20.9	20.0	25.5	25.8	26.2	---	---	---	27.6
24	21.7	23.5	---	20.5	15.3	25.6	26.9	26.1	---	---	---	27.3
25	22.2	22.7	---	20.9	14.3	24.6	27.3	26.2	---	---	27.6	26.8
26	21.7	23.3	---	20.8	15.1	24.8	27.4	27.1	---	---	24.2	26.8
27	21.9	24.4	---	21.1	15.7	25.4	26.7	26.8	---	---	23.7	27.8
28	22.4	24.4	---	21.3	18.1	25.5	27.2	26.8	---	---	23.3	28.6
29	22.4	22.1	---	21.6	---	25.8	27.2	25.4	---	---	24.0	28.5
30	23.2	23.3	---	22.1	---	25.6	26.0	26.8	---	---	23.9	28.4
31	24.1	---	---	22.5	---	25.7	---	29.1	---	---	24.0	---
MEAN	23.3	---	---	---	22.1	22.4	25.8	25.2	---	---	---	27.3
MAX	27.0	---	---	---	26.1	25.8	27.7	29.1	---	---	---	28.8
MIN	20.3	---	---	---	14.3	15.3	23.0	21.4	---	---	---	22.9

02256500 FISHEATING CREEK AT PALMDALE, FL--Continued
(National stream-quality accounting network station)

WATER-QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	GAGE HEIGHT (FEET) (00065)	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	OXYGEN, DIS-SOLVED (MG/L) (00300)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)
DEC 07...	0815	1.07	9.1	274	6.8	19.0	7.2	--	--	63
MAR 14...	1046	2.84	62	407	6.6	20.0	5.7	E27	170	85
APR 10...	1036	0.31	0.43	338	7.4	24.5	6.6	E3	E8	71
JUL 18...	1200	2.35	40	290	6.7	28.0	2.9	E170	E10	64
SEP 05...	1656	4.06	137	149	6.3	29.5	3.2	370	62	36

DATE	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)
DEC 07...	13	7.4	31	5.1	19	28	66	0.10	3.5	198
MAR 14...	17	10	40	6.0	13	49	87	0.10	5.2	282
APR 10...	15	8.1	32	6.0	35	19	70	0.10	1.6	233
JUL 18...	14	6.7	29	5.1	31	10	61	0.10	6.3	244
SEP 05...	8.1	3.8	15	2.0	13	<1.0	29	0.10	5.3	139

DATE	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS-PHOROUS TOTAL (MG/L AS P) (00665)	PHOS-PHOROUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHOROUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)	SEDI-MENT, SUS-PENDED (MG/L) (80154)
DEC 07...	0.010	<0.100	0.030	0.040	0.90	0.140	0.130	0.100	100	3
MAR 14...	<0.010	<0.100	0.040	0.040	1.4	0.110	0.100	0.060	67	3
APR 10...	0.010	<0.100	0.030	0.040	1.3	0.270	0.230	0.130	50	16
JUL 18...	0.010	<0.100	0.070	0.070	1.8	0.280	0.260	0.270	100	3
SEP 05...	0.020	<0.100	0.060	0.060	1.7	0.300	0.290	0.230	--	--

02256500 FISHEATING CREEK AT PALMDALE, FL--Continued
(National stream-quality accounting network station)

WATER-QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106)	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)	BARIUM, DIS-SOLVED (UG/L AS BA) (01005)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE) (01010)	CADMIUM DIS-SOLVED (UG/L AS CD) (01025)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR) (01030)	COBALT, DIS-SOLVED (UG/L AS CO) (01035)	COPPER, DIS-SOLVED (UG/L AS CU) (01040)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)	LITHIUM DIS-SOLVED (UG/L AS LI) (01130)
DEC 07...	--	--	--	--	--	--	--	--	--	--
MAR 14...	120	<1	34	<0.5	<1	<1	<3	3	<5	7
APR 10...	--	--	--	--	--	--	--	--	--	--
JUL 18...	220	1	28	<0.5	<1	<1	<3	2	<1	<4
SEP 05...	170	<1	18	<0.5	2	2	<3	3	13	<4

DATE	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	MERCURY DIS-SOLVED (UG/L AS HG) (71890)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO) (01060)	NICKEL, DIS-SOLVED (UG/L AS NI) (01065)	SELE-NIUM, DIS-SOLVED (UG/L AS SE) (01145)	SILVER, DIS-SOLVED (UG/L AS AG) (01075)	STRON-TIUM, DIS-SOLVED (UG/L AS SR) (01080)	VANA-DIUM, DIS-SOLVED (UG/L AS V) (01085)	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)
DEC 07...	--	--	--	--	--	--	--	--	--
MAR 14...	8	0.4	<10	3	<1	<1.0	1600	<6	13
APR 10...	--	--	--	--	--	--	--	--	--
JUL 18...	21	0.1	<10	<1	<1	<1.0	1100	<6	35
SEP 05...	21	<0.1	<10	1	<1	<1.0	510	<6	20

FISHEATING CREEK BASIN AND INFLOW TO LAKE OKEECHOBEE FROM NORTHWEST

02257800 HARNEY POND CANAL AT S-71, NEAR LAKEPORT, FL

LOCATION.--27°02'00", long 81°04'15", in NE¼ sec.1, T.40 S., R.32 E., Glades County, Hydrologic Unit 03090103, near left bank 220 ft upstream from control structure 71, 0.1 mi west of State Highway 721, 2.3 mi upstream from bridge on State Highway 78, and 5.2 mi northeast of Lakeport.

DRAINAGE AREA.--Indeterminate.

PERIOD OF RECORD.--October 1962 to September 1989 (discontinued).

GAGE.--Water-stage and deflection-meter recorders. Datum of gage is National Geodetic Vertical Datum of 1929 (U.S. Army Corps of Engineers bench mark).

REMARKS.--Records fair. Flow regulated by operation of structure 71, by storage releases upstream from structures 68, 70, and 82. Flow may be diverted to Indian Prairie Canal by the combined operation of structures 70 and 75 upstream.

COOPERATION.--Gate-operation record provided by South Florida Water Management District.

AVERAGE DISCHARGE.--27 years, 202 ft^3/s, 146,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 4,670 ft^3/s, Mar. 27, 1970; maximum gage height, 25.90 ft, June 8, 1968; no flow for many days each year; minimum gage height, 12.97 ft, Feb. 9, 1972.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 1,500 ft^3/s, Aug. 14; maximum gage height, 20.96 ft, Sept. 11; no flow for many days; minimum gage height, 17.88 ft, Sept. 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	260	122	195	.00	126
2	.00	.00	.00	.00	.00	.00	.00	114	.00	195	.00	564
3	.00	.00	97	.00	.00	355	.00	364	.00	394	.00	1020
4	349	340	173	.00	.00	146	.00	190	.00	201	165	828
5	133	84	.00	.00	.00	304	.00	274	.00	223	50	577
6	156	135	116	.00	.00	322	.00	78	.00	122	.00	425
7	171	.00	83	.00	.00	176	.00	.00	.00	108	.00	569
8	.00	.00	.00	.00	.00	167	.00	90	.00	.00	123	280
9	.00	.00	.00	.00	.00	362	.00	.00	.00	.00	109	232
10	185	.00	.00	.00	.00	234	.00	.00	.00	.00	102	140
11	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	258
12	.00	.00	112	.00	146	360	.00	168	.00	.00	143	177
13	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	676	.00
14	.00	.00	.00	.00	.00	318	.00	.00	.00	.00	1500	117
15	.00	.00	.00	.00	.00	.00	.00	138	.00	173	1020	.00
16	.00	.00	.00	.00	.00	310	.00	236	.00	.00	635	.00
17	.00	.00	90	.00	.00	.00	213	.00	.00	138	234	127
18	.00	.00	.00	.00	.00	173	204	303	.00	231	75	257
19	.00	.00	.00	.00	.00	.00	.00	194	.00	276	89	231
20	.00	.00	.00	.00	89	.00	330	223	.00	99	143	311
21	.00	.00	.00	.00	.00	144	331	224	.00	145	.00	218
22	.00	350	.00	.00	.00	112	122	63	.00	.00	.00	.00
23	.00	.00	.00	254	.00	.00	221	.00	.00	.00	.00	290
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	80	.00	.00	175	92	107	.00	.00	.00	352
26	.00	.00	.00	31	.00	.00	.00	98	.00	.00	.00	420
27	.00	.00	80	89	.00	.00	104	.00	116	.00	.00	241
28	.00	96	.00	.00	.00	.00	.00	57	.00	155	137	149
29	.00	.00	.00	.00	---	158	197	212	.00	.00	119	190
30	.00	.00	.00	.00	---	187	134	216	.00	109	167	39
31	.00	---	.00	.00	---	.00	---	213	---	.00	.00	---
TOTAL	994.00	1005.00	831.00	374.00	235.00	4003.00	1948.00	3822.00	238.00	2764.00	5487.00	8138.00
MEAN	32.1	33.5	26.8	12.1	8.39	129	64.9	123	7.93	89.2	177	271
MAX	349	350	173	254	146	362	331	364	122	394	1500	1020
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	1970	1990	1650	742	466	7940	3860	7580	472	5480	10880	16140

CAL YR 1988 TOTAL 58808.00 MEAN 161 MAX 1330 MIN .00 AC-FT 116600
WTR YR 1989 TOTAL 29839.00 MEAN 81.8 MAX 1500 MIN .00 AC-FT 59190

02257800 HARNEY POND CANAL AT S-71, NEAR LAKEPORT, FL--Continued

GAGE HEIGHT, IN FEET ABOVE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18.58	19.90	19.25	19.33	19.49	19.92	19.47	19.83	19.65	19.83	19.81	19.42
2	18.61	19.88	19.18	19.27	19.66	19.91	19.55	19.63	19.20	19.82	19.61	19.70
3	18.93	19.88	19.75	19.20	19.80	19.71	19.59	19.80	19.21	19.68	19.46	19.74
4	19.66	19.80	19.73	19.15	19.88	19.68	19.60	19.57	19.24	19.66	19.64	19.80
5	19.48	19.56	19.98	18.98	19.93	19.49	19.68	19.62	19.23	19.65	19.40	19.34
6	19.50	19.84	19.95	19.03	19.93	19.60	19.89	19.62	19.25	19.78	19.36	19.67
7	19.53	19.71	19.43	19.28	19.73	19.51	19.89	19.85	19.30	19.80	19.30	19.28
8	19.38	19.61	19.13	19.47	19.55	19.76	19.88	19.78	19.30	19.71	19.43	19.69
9	19.44	19.54	18.94	19.63	19.58	19.85	19.90	19.64	19.27	19.46	19.52	19.59
10	19.47	19.41	18.85	19.77	19.63	19.71	19.89	19.43	19.32	19.25	19.54	19.73
11	19.25	19.40	18.82	19.84	19.71	19.79	19.83	19.58	19.26	19.12	19.68	19.83
12	19.20	19.39	19.66	19.80	19.58	19.53	19.75	19.58	19.28	19.14	19.78	19.33
13	19.20	19.28	19.40	19.56	19.51	19.57	19.67	19.18	19.18	19.17	19.71	19.27
14	19.20	19.22	19.28	19.15	19.44	19.62	19.62	19.15	19.05	19.42	19.74	19.64
15	19.19	19.15	19.24	18.87	19.28	19.62	19.71	19.56	19.01	19.61	19.77	19.57
16	19.19	19.14	19.40	18.65	19.34	19.49	19.82	19.63	18.98	19.51	19.68	19.67
17	19.07	19.35	19.72	18.47	19.24	19.30	19.72	19.41	18.99	19.89	19.66	19.77
18	18.89	19.55	19.83	18.37	19.11	19.53	19.77	19.74	19.10	19.73	19.67	19.73
19	18.75	19.68	19.80	18.65	19.21	19.86	19.60	19.53	19.12	19.90	19.75	19.82
20	18.85	19.79	19.63	18.96	19.52	19.87	19.83	19.43	19.11	19.63	19.50	19.69
21	19.09	19.86	19.43	19.23	19.35	19.81	19.82	19.75	19.15	19.53	19.38	19.66
22	19.29	19.84	19.31	19.51	19.38	19.49	19.72	19.47	19.06	19.47	19.44	19.50
23	19.45	19.67	19.20	19.74	19.41	19.60	19.71	19.83	19.07	19.56	19.47	19.83
24	19.58	19.87	19.23	19.96	19.47	19.72	19.49	20.02	19.06	19.69	19.49	19.78
25	19.70	19.95	19.73	19.78	19.59	19.74	19.65	20.02	18.80	19.67	19.45	19.73
26	19.72	20.03	19.53	19.70	19.70	19.91	19.82	19.81	18.75	19.63	19.46	19.82
27	19.73	20.09	19.67	19.73	19.84	19.89	19.70	19.57	19.04	19.55	19.49	19.58
28	19.76	19.83	19.63	19.33	19.92	19.90	19.78	19.82	19.38	19.57	19.61	19.88
29	19.84	19.44	19.56	19.08	---	19.90	19.66	19.75	19.63	19.84	19.47	19.60
30	19.94	19.31	19.47	19.04	---	19.31	19.73	19.59	19.82	19.77	19.30	19.63
31	19.93	---	19.39	19.25	---	19.34	---	19.75	---	19.96	19.20	---
MEAN	19.34	19.63	19.46	19.28	19.56	19.68	19.72	19.64	19.19	19.62	19.54	19.64
MAX	19.94	20.09	19.98	19.96	19.93	19.92	19.90	20.02	19.82	19.96	19.81	19.88
MIN	18.58	19.14	18.82	18.37	19.11	19.30	19.47	19.15	18.75	19.12	19.20	19.27

CAL YR 1988 MEAN 19.63 MAX 20.23 MIN 16.81
WTR YR 1989 MEAN 19.53 MAX 20.09 MIN 18.37

FISHEATING CREEK BASIN AND INFLOW TO LAKE OKEECHOBEE FROM NORTHWEST

02259200 INDIAN PRAIRIE CANAL AT S-72, NEAR OKEECHOBEE, FL

LOCATION.--Lat 27°05'35", long 81°00'25", in SE¼ sec. 10, T. 39 S., R. 33 E., Glades County, Hydrologic Unit 03090103, near left bank 230 ft upstream from control structure 72, 2.6 mi upstream from bridge on State Highway 78, and 15 mi southwest of Okeechobee.

DRAINAGE AREA.--Indeterminate.

PERIOD OF RECORD.--October 1962 to September 1989 (discontinued).

GAGE.--Water-stage and deflection-meter recorders. Datum of gage is 9.0 ft above National Geodetic Vertical Datum of 1929 (U.S. Army Corps of Engineers bench mark).

REMARKS.--Records fair. Flow regulated by operation of structure 72, by storage releases upstream at structures 68, 75, and 82, and several small diversions for irrigation. Flow may be diverted to Harney Pond Canal by the combined operation of structures 70 and 75.

COOPERATION.--Gate-operation record provided by South Florida Water Management District.

AVERAGE DISCHARGE.--27 years, 42.3 ft^3/s, 30,650 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 2,130 ft^3/s, Oct. 3, 1969; maximum gage height, 14.71 ft, Oct. 13, 1987; no flow for many days each year; minimum gage height, 6.55 ft, Oct. 11, 1974.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 420 ft^3/s, July 2; maximum gage height, 12.21 ft, Sept. 1; no flow for many days; minimum gage height, 8.22 ft, May 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	.00	188	.00	156
2	.00	.00	.00	.00	.00	.00	.00	105	.00	420	.00	277
3	.00	.00	73	.00	.00	.00	.00	117	.00	256	.00	209
4	.00	.00	.00	.00	.00	184	.00	.00	.00	169	.00	226
5	.00	.00	82	.00	.00	.00	.00	149	.00	172	.00	115
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	152	.00	260
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	160	.00	109
8	.00	.00	.00	.00	.00	105	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	107	.00	.00	.00	144	.00	111
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
11	e.00	.00	.00	.00	.00	117	.00	.00	.00	.00	.00	.00
12	e.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	136	.00
13	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	135	.00	137	.00	.00	251	.00
15	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	128	.00
16	.00	.00	.00	.00	.00	.00	136	170	.00	.00	145	.00
17	.00	.00	.00	.00	.00	.00	102	171	.00	.00	183	.00
18	.00	.00	123	.00	.00	.00	118	.00	.00	.00	118	.00
19	.00	.00	.00	.00	.00	.00	112	144	.00	.00	140	123
20	.00	.00	.00	.00	.00	.00	61	75	.00	.00	111	97
21	.00	.00	.00	.00	.00	.00	200	76	.00	.00	132	152
22	.00	.00	.00	.00	.00	.00	77	.00	.00	.00	129	120
23	.00	.00	.00	.00	.00	.00	76	.00	.00	180	121	97
24	.00	195	.00	.00	.00	.00	.00	.00	.00	.00	98	117
25	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	112	125
26	.00	.00	.00	.00	.00	.00	126	266	.00	.00	114	223
27	.00	.00	.00	.00	.00	.00	95	.00	.00	143	128	100
28	.00	121	.00	.00	.00	.00	.00	.00	.00	.00	104	118
29	.00	.00	.00	.00	---	.00	112	.00	.00	.00	.00	109
30	.00	.00	.00	.00	---	.00	86	211	.00	.00	97	121
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	0.00	316.00	278.00	0.00	0.00	648.00	1301.00	1621.00	0.00	1984.00	2247.00	2965.00
MEAN	.00	10.5	8.97	.00	.00	20.9	43.4	52.3	.00	64.0	72.5	98.8
MAX	.00	195	123	.00	.00	184	200	266	.00	420	251	277
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.0	627	551	.0	.0	1290	2580	3220	.0	3940	4460	5880

CAL YR 1988 TOTAL 10204.00 MEAN 27.9 MAX 375 MIN .00 AC-FT 20240
WTR YR 1989 TOTAL 11360.00 MEAN 31.1 MAX 420 MIN .00 AC-FT 22530

e Estimated

02259200 INDIAN PRAIRIE CANAL AT S-72, NEAR OKEECHOBEE, FL--Continued

GAGE HEIGHT, IN FEET ABOVE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10.08	11.11	10.67	10.91	11.59	11.10	11.34	11.70	11.52	11.45	10.63	11.78
2	9.92	11.10	11.26	10.99	11.52	11.28	11.41	11.32	11.45	11.43	10.98	11.62
3	10.15	11.19	11.75	11.04	11.49	11.62	11.43	11.58	11.55	11.52	11.34	11.65
4	10.92	11.59	11.73	11.21	11.47	11.70	11.44	11.36	11.70	11.65	11.57	11.67
5	11.30	11.64	11.60	11.10	11.63	11.42	11.50	11.60	11.83	11.55	11.59	11.65
6	11.47	11.75	11.40	10.90	11.77	11.74	11.71	11.16	11.85	11.44	11.78	11.57
7	11.49	11.76	11.67	11.07	11.53	11.87	11.87	11.38	11.83	11.38	11.82	11.66
8	11.55	11.65	11.33	11.29	11.23	11.56	11.90	11.45	11.81	11.69	11.87	11.59
9	11.60	11.57	11.02	11.46	11.40	11.62	11.90	11.36	11.78	11.41	11.87	11.86
10	11.52	11.39	10.84	11.52	11.63	11.85	11.86	11.11	11.65	11.36	11.87	11.40
11	10.95	11.37	10.68	11.38	11.69	11.49	11.88	10.98	11.75	11.72	11.95	11.62
12	10.44	11.42	10.65	11.14	11.74	11.69	11.78	11.02	11.86	11.66	11.71	11.67
13	10.17	11.46	10.72	10.87	11.67	11.90	11.63	11.49	11.68	11.60	11.34	11.68
14	10.10	11.46	11.02	10.60	11.48	11.64	11.61	11.77	11.54	11.90	11.55	11.66
15	10.06	11.46	11.36	10.25	11.28	11.38	11.78	11.25	11.45	11.94	11.47	11.61
16	10.05	11.66	11.27	9.94	11.27	11.61	11.64	11.33	11.28	11.82	11.43	11.57
17	10.08	11.76	11.63	9.82	11.30	11.69	11.57	11.66	11.26	11.69	11.36	11.56
18	10.30	11.61	11.52	10.13	11.40	11.76	11.64	11.31	11.43	11.59	11.52	11.63
19	10.34	11.46	10.96	10.30	11.49	11.82	11.63	11.31	11.53	11.56	11.51	11.64
20	10.27	11.40	10.69	10.38	11.51	11.76	11.50	11.67	11.48	11.47	11.34	11.70
21	10.35	11.42	10.36	10.44	11.44	11.70	11.64	11.07	11.45	11.36	11.56	11.67
22	10.60	11.47	10.17	10.65	11.58	11.60	11.66	11.83	11.45	11.72	11.52	11.56
23	10.77	11.61	10.52	10.92	11.55	11.59	11.54	11.95	11.51	11.78	11.58	11.51
24	10.75	11.50	10.93	11.16	11.24	11.62	11.83	11.96	11.60	11.07	11.62	11.60
25	10.58	11.31	11.28	11.30	11.19	11.63	11.93	11.93	11.60	11.51	11.54	11.57
26	10.37	11.62	11.49	11.35	11.16	11.64	11.53	10.74	11.58	11.82	11.59	11.56
27	10.55	11.37	11.54	11.40	11.16	11.62	11.73	11.14	11.33	11.28	11.64	11.62
28	10.91	11.75	11.08	11.31	11.15	11.58	11.56	11.49	11.15	10.75	11.55	11.63
29	11.05	11.25	10.76	11.13	---	11.44	11.56	11.67	11.49	10.72	11.84	11.54
30	11.12	10.92	10.83	11.38	---	11.31	11.69	11.28	11.82	10.69	11.58	11.72
31	11.15	---	10.86	11.60	---	11.23	---	10.74	---	10.64	11.61	---
MEAN	10.68	11.47	11.08	10.93	11.45	11.60	11.66	11.41	11.57	11.46	11.56	11.63
MAX	11.60	11.76	11.75	11.60	11.77	11.90	11.93	11.96	11.86	11.94	11.95	11.86
MIN	9.92	10.92	10.17	9.82	11.15	11.10	11.34	10.74	11.15	10.64	10.63	11.40

CAL YR 1988 MEAN 11.56 MAX 12.21 MIN 9.92
WTR YR 1989 MEAN 11.37 MAX 11.96 MIN 9.82

KISSIMMEE RIVER BASIN

02262900 BOGGY CREEK NEAR TAFT, FL

LOCATION.--Lat 28°22'16", long 81°18'39", in NE¼ sec.28, T.24 S., R.30 E., Orange County, Hydrologic Unit 03090101, on left bank 450 ft downstream from Boggy Creek Swamp, 2.0 mi upstream from bridge on State Highway 530, 3.5 mi upstream from mouth, and 5.5 mi southeast of Taft.

DRAINAGE AREA.--83.6 mi^2.

PERIOD OF RECORD.--September 1959 to current year.

GAGE.--Water-stage recorder. Datum of gage is 56.08 ft above National Geodetic Vertical Datum of 1929 (U.S. Army Corps of Engineers bench mark). Auxiliary water-stage recorder on the south side of East Lake Tohopekaliga since Oct.1, 1973, and prior to July 19, 1968. From July 19, 1968, to Sept. 30, 1973, auxiliary water-stage recorder at St. Cloud Canal above S-59.

REMARKS.--Records good. Some diversion to ground water through drainage wells in lakes upstream from station.

AVERAGE DISCHARGE.--30 years, 47.9 ft^3/s, 7.78 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,680 ft^3/s, Mar. 18, 1960, gage height, 13.64 ft, from floodmarks; no flow May 19, 1981, May 18-21, June 9, 1985; minimum gage height, 1.66 ft, May 18,19,20, 1985.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 661 ft^3/s, Nov. 24, gage height, 9.62 ft; minimum 0.86 ft^3/s, June 5, gage height, 1.81 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	55	20	163	38	91	22	10	24	1.6	45	22	50
2	52	20	137	37	83	26	9.6	30	1.4	35	29	73
3	80	21	120	36	74	31	9.4	26	1.4	30	30	103
4	134	39	108	34	66	32	10	21	1.5	25	22	111
5	133	41	99	33	60	34	12	16	1.3	20	20	100
6	115	41	92	33	55	30	12	13	2.4	20	18	110
7	99	38	86	32	50	31	10	10	18	29	16	116
8	86	34	80	31	47	40	8.9	8.1	26	27	14	105
9	77	31	76	31	44	54	8.0	7.1	25	28	14	105
10	71	29	80	30	41	44	7.3	6.5	20	24	21	99
11	65	27	104	30	38	39	6.7	6.5	19	20	28	97
12	64	25	114	31	36	34	6.7	5.3	30	19	45	84
13	59	24	103	45	35	30	6.3	4.5	30	17	122	77
14	52	23	95	39	36	27	7.3	4.8	55	17	126	69
15	47	21	89	34	41	25	23	11	43	16	100	61
16	45	20	83	34	37	22	29	11	30	26	78	57
17	44	19	77	33	31	20	25	11	22	25	62	67
18	42	18	71	32	29	19	20	8.7	21	23	53	108
19	39	17	66	31	27	17	16	7.2	23	23	51	199
20	36	17	61	30	26	17	14	6.1	20	23	93	191
21	35	16	57	51	26	15	13	5.2	20	27	129	154
22	33	19	54	225	26	14	13	4.6	26	33	96	127
23	32	393	51	282	36	14	11	4.0	31	33	82	114
24	30	646	50	269	28	14	8.7	3.5	39	27	72	111
25	28	598	47	234	24	14	7.4	3.1	29	23	66	131
26	26	482	45	195	23	14	6.5	2.9	26	18	70	153
27	24	378	42	166	22	13	5.5	2.6	25	14	68	147
28	23	299	41	143	21	12	4.8	2.2	26	12	70	138
29	23	235	39	125	---	12	4.5	2.0	52	12	65	137
30	22	192	39	110	---	12	9.9	1.8	67	15	55	120
31	22	---	39	100	---	11	---	1.9	---	15	45	---
TOTAL	1693	3783	2408	2574	1153	739	335.5	271.6	732.6	721	1782	3314
MEAN	54.6	126	77.7	83.0	41.2	23.8	11.2	8.76	24.4	23.3	57.5	110
MAX	134	646	163	282	91	54	29	30	67	45	129	199
MIN	22	16	39	30	21	11	4.5	1.8	1.3	12	14	50
CFSM	.65	1.51	.93	.99	.49	.29	.13	.10	.29	.28	.69	1.32
IN.	.75	1.68	1.07	1.15	.51	.33	.15	.12	.33	.32	.79	1.47

CAL YR 1988 TOTAL 29626.6 MEAN 80.9 MAX 683 MIN 6.3 CFSM .97 IN. 13.18
WTR YR 1989 TOTAL 19506.7 MEAN 53.4 MAX 646 MIN 1.3 CFSM .64 IN. 8.68

KISSIMMEE RIVER BASIN

02263800 SHINGLE CREEK AT AIRPORT, NEAR KISSIMMEE, FL

LOCATION.--Lat 28°18'14", long 81°27'04", in NW¼ sec.19, T.25 S., R.29 E., Osceola County, Hydrologic Unit 03090101, near center of span on downstream side of bridge on U.S. Highway 192, 1.0 mi northwest of Kissimmee Airport, 3 mi west of Kissimmee, and 5.6 mi upstream from mouth.

DRAINAGE AREA.--89.2 mi^2.

PERIOD OF RECORD.--October 1958 to current year.

GAGE.--Water-stage recorder. Datum of gage is 60.66 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good.

AVERAGE DISCHARGE.--31 years, 71.6 ft^3/s, 10.90 in/yr, 51,870 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,320 ft^3/s, Mar. 18, 1960, gage height, 11.00 ft; no flow for many days in some years; minimum gage height, 2.21 ft, June 9, 1965.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 629 ft^3/s, Nov. 26, gage height, 8.17 ft; no flow for many days; minimum gage height, 3.54 ft, May 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	30	9.7	259	39	103	16	10	28	.00	30	8.4	43
2	27	8.4	211	37	84	19	9.4	23	.00	32	8.2	45
3	34	8.0	170	36	71	24	9.4	25	.00	37	11	73
4	63	20	137	35	62	32	7.9	23	.00	39	9.5	69
5	85	35	111	33	55	34	6.0	17	.00	32	10	64
6	96	46	91	31	51	32	5.5	12	.00	32	9.7	66
7	94	47	77	29	48	29	4.0	7.3	1.3	38	9.3	78
8	80	50	68	28	46	28	4.8	4.4	12	32	8.4	88
9	64	46	62	27	44	28	5.2	.73	11	29	7.7	88
10	52	35	57	26	41	28	3.5	.00	13	30	15	82
11	43	28	61	26	37	28	.99	.00	15	35	39	74
12	34	23	84	26	34	27	.03	.00	14	43	48	63
13	29	20	98	26	32	26	.00	.00	11	32	72	53
14	26	17	112	25	31	25	.00	.00	7.6	25	76	44
15	23	15	118	24	29	22	2.7	.00	5.6	21	80	36
16	21	14	116	24	28	20	5.5	.00	4.5	19	90	31
17	19	13	104	24	26	18	12	.00	.58	16	91	28
18	18	12	90	25	23	18	17	.00	.00	16	85	30
19	17	11	80	25	22	18	14	.00	.00	21	74	47
20	17	11	71	24	27	18	10	.00	.00	19	71	59
21	17	11	64	40	27	17	7.0	.00	.00	20	73	59
22	16	13	59	165	25	16	5.6	.00	.01	23	78	57
23	15	240	55	213	22	17	3.3	.00	1.6	28	84	65
24	14	383	53	236	22	17	.69	.00	10	23	84	94
25	13	496	50	275	22	20	.00	.00	15	20	77	128
26	12	618	47	298	19	19	.00	.00	16	17	69	208
27	11	556	45	286	17	17	.00	.00	18	14	66	282
28	11	458	43	252	15	14	.00	.00	25	12	69	321
29	10	373	42	209	---	13	.13	.00	41	9.5	68	325
30	10	311	43	166	---	12	11	.00	24	8.4	60	310
31	9.7	---	41	130	---	11	---	.00	---	6.9	51	---
TOTAL	1010.7	3928.1	2719	2840	1063	663	155.64	140.43	246.19	759.8	1602.2	3010
MEAN	32.6	131	87.7	91.6	38.0	21.4	5.19	4.53	8.21	24.5	51.7	100
MAX	96	618	259	298	103	34	17	28	41	43	91	325
MIN	9.7	8.0	41	24	15	11	.00	.00	.00	6.9	7.7	28
AC-FT	2000	7790	5390	5630	2110	1320	309	279	488	1510	3180	5970
CFSM	.37	1.47	.98	1.03	.43	.24	.06	.05	.09	.27	.58	1.12
IN.	.42	1.64	1.13	1.18	.44	.28	.06	.06	.10	.32	.67	1.26

CAL YR 1988 TOTAL 32434.1 MEAN 88.6 MAX 680 MIN 6.4 AC-FT 64330 CFSM .99 IN. 13.53
WTR YR 1989 TOTAL 18138.06 MEAN 49.7 MAX 618 MIN .00 AC-FT 35980 CFSM .56 IN. 7.56

KISSIMMEE RIVER BASIN

02263869 SOUTH LAKE OUTLET AT S-15 NEAR VINELAND, FL

LOCATION.--Lat 28°24'45", long 81°32'17", in SW¼ sec.8, T.24 S., R.28 E., Orange County, Hydrologic Unit 03090101, on right bank at upstream wingwall of control structure 15, 300 ft south of natural lake shoreline, 1,600 ft west of State Highway 535, and 2.4 mi northwest of Vineland.

DRAINAGE AREA.--4.0 mi^2, approximately.

PERIOD OF RECORD.--June 1972 to September 1982, October 1986 to current year.

GAGE.--Water-stage and gate-opening recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (Reedy Creek Improvement District bench mark). Auxiliary water-stage recorder at downstream side of control structure since May 1970.

REMARKS.--Records fair except those below 1.0 ft^3/s, which are poor. Flow from South Lake into South Lake outlet regulated by automatic gates in control structure 15. Discharge computed from relation between discharge and gate openings. Gage heights are published as elevations for South Lake (station 02263868) in the section of this report entitled LAKE ELEVATIONS.

AVERAGE DISCHARGE.--13 years, 0.39 ft^3/s, 283 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 48 ft^3/s, Sept. 10, 1974; maximum gage height, 94.85 ft, Apr. 6, 1987; no flow for many days each year; minimum gage height, 90.59 ft, July 17, 1981.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 17 ft^3/s, Nov. 23; maximum gage height, 94.36 ft, Dec. 14; no flow for many days; minimum gage height, 91.37 ft, Sept. 22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.0	.00	4.5	2.5	.97	.20	.20	.07	.00	.00	.00	.00
2	1.0	.00	3.7	2.5	.97	.20	.20	.06	.00	.00	.00	.00
3	1.0	.00	3.2	2.5	.39	.20	.20	.05	.00	.00	.00	.00
4	.95	.00	2.8	2.5	.68	.20	.20	.05	.00	.00	.00	.00
5	.90	.00	2.7	2.5	.20	.20	.20	.04	.00	.00	.00	.00
6	.85	.00	2.5	2.3	.39	.20	.20	.03	.00	.00	.00	.00
7	.80	.00	2.5	2.4	.39	.20	.20	.02	.00	.00	.00	.00
8	.75	.00	2.5	2.4	.30	.20	.20	.02	.00	.00	.00	.00
9	.70	.00	2.5	2.5	1.4	.20	.20	.01	.00	.00	.00	.00
10	.65	.00	2.5	2.5	.68	.20	.20	.01	.00	.00	.00	.00
11	.60	.00	3.0	2.5	.20	.20	.20	.00	.00	.00	.00	.00
12	.55	.00	4.7	2.5	.20	.20	.20	.00	.00	.00	.00	.00
13	.50	.00	3.4	2.3	.20	.20	.19	.00	.00	.00	.00	.00
14	.45	.00	7.0	2.3	.20	.20	.19	.00	.00	.00	.00	.00
15	.40	.00	2.5	2.5	.20	.20	.18	.00	.00	.00	.00	.00
16	.35	.00	2.5	2.5	.20	.20	.17	.00	.00	.00	.00	.00
17	.30	.00	2.5	2.3	.20	.20	.16	.00	.00	.00	.00	.00
18	.25	.00	2.5	2.5	.20	.20	.16	.00	.00	.00	.00	.00
19	.20	.00	2.5	2.2	.20	.20	.15	.00	.00	.00	.00	.00
20	.15	.00	2.5	2.5	.20	.20	.14	.00	.00	.00	.00	.00
21	.10	.00	2.5	2.5	.20	.20	.14	.00	.00	.00	.00	.00
22	.05	3.9	2.5	2.7	.20	.20	.13	.00	.00	.00	.00	.00
23	.00	17	2.5	2.5	.20	.20	.12	.00	.00	.00	.00	.00
24	.00	15	2.5	2.4	.20	.20	.12	.00	.00	.00	.00	.00
25	.00	9.8	2.5	2.2	.20	.20	.11	.00	.00	.00	.00	.00
26	.00	8.5	2.5	1.4	.20	.20	.10	.00	.00	.00	.00	.00
27	.00	7.3	2.5	.68	.20	.20	.09	.00	.00	.00	.00	.00
28	.00	7.0	2.5	1.1	.20	.20	.09	.00	.00	.00	.00	.00
29	.00	5.2	2.5	.68	---	.20	.08	.00	.00	.00	.00	.00
30	.00	4.5	2.5	.49	---	.20	.07	.00	.00	.00	.00	.00
31	.00	---	2.5	.30	---	.20	---	.00	---	.00	.00	---
TOTAL	12.50	78.20	90.0	65.65	9.97	6.20	4.79	0.36	0.00	0.00	0.00	0.00
MEAN	.40	2.61	2.90	2.12	.36	.20	.16	.012	.00	.00	.00	.00
MAX	1.0	17	7.0	2.7	1.4	.20	.20	.07	.00	.00	.00	.00
MIN	.00	.00	2.5	.30	.20	.20	.07	.00	.00	.00	.00	.00

CAL YR 1988 TOTAL 490.82 MEAN 1.34 MAX 17 MIN .00
WTR YR 1989 TOTAL 267.67 MEAN .73 MAX 17 MIN .00

KISSIMMEE RIVER BASIN

02264000 CYPRESS CREEK AT VINELAND, FL

LOCATION.--Lat 28°23'25", long 81°31'11", in NW¼ sec.21, T.24 S., R.28 E., Orange County, Hydrologic Unit 03090101, at upstream side of culverts on State Highway 535, 1.0 mi west of Vineland.

DRAINAGE AREA.--30.3 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1945 to current year.

GAGE.--Water-stage recorder. Datum of gage is 96.20 ft above National Geodetic Vertical Datum of 1929. Prior to June 13, 1946, nonrecording gage at same site and datum.

REMARKS.--Records fair. Some diversions by pumping above station for irrigation.

AVERAGE DISCHARGE.--44 years, 5.68 ft^3/s, 2.55 in/yr, 4,120 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 309 ft^3/s, revised, Sept. 11, 1960, gage height, 4.66 ft; no flow for many days in most years; creek dry at gage for many days in some years.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 30 ft^3/s and maximum (*).

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 23	1400	*65	*3.35	Jan. 22	1300	35	3.07

No flow May 20 to Sept. 30; creek dry at gage for many days.

REVISIONS.--The maximum discharge for calendar and water year 1960 has been revised to 309 ft^3/s, Sept. 11, 1960, gage height, 4.66 ft; revised daily discharges, in cubic feet per second, for periods in September 1960 are given below. These figures supercede those published in the report for 1960.

Sept. 11..........276 Sept. 12..........216 Sept. 13..........187 Sept. 14..........163

MONTH	TOTAL	MEAN	MAX	MIN	AC-FT	(ft^3/s)/mi^2	IN
September 1960	3239	108	276	34	6430	3.56	3.97
Wtr Yr 1960	14810.3	40.5	276	4.9	29400	1.34	18.17
Cal Yr 1960	14368.0	39.3	276	4.8	28510	1.30	17.63

02264000 CYPRESS CREEK AT VINELAND, FL--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.9	1.2	25	13	18	4.9	1.9	1.1	.00	.00	.00	.00
2	9.0	1.2	23	12	18	6.0	1.7	.98	.00	.00	.00	.00
3	15	1.1	22	12	17	6.3	1.4	.75	.00	.00	.00	.00
4	18	2.3	20	12	16	6.0	1.3	.61	.00	.00	.00	.00
5	16	2.2	19	12	16	5.7	1.2	.49	.00	.00	.00	.00
6	14	2.1	18	11	15	5.5	1.1	.37	.00	.00	.00	.00
7	13	1.9	17	10	15	5.7	.91	.30	.00	.00	.00	.00
8	12	1.7	17	9.9	14	6.0	.79	.24	.00	.00	.00	.00
9	10	1.6	16	9.5	14	6.0	.69	.19	.00	.00	.00	.00
10	9.1	1.5	16	9.2	13	5.9	.59	.16	.00	.00	.00	.00
11	8.0	1.4	18	9.1	12	5.7	.54	.16	.00	.00	.00	.00
12	7.2	1.3	26	8.9	11	5.3	.51	.12	.00	.00	.00	.00
13	6.3	1.2	26	8.6	11	4.9	.45	.10	.00	.00	.00	.00
14	5.7	1.2	25	8.3	10	4.7	.49	.09	.00	.00	.00	.00
15	5.1	1.1	23	8.0	9.5	4.4	1.4	.08	.00	.00	.00	.00
16	4.6	.99	22	7.7	9.0	4.1	1.4	.07	.00	.00	.00	.00
17	4.2	.92	21	7.5	8.7	3.9	1.2	.05	.00	.00	.00	.00
18	3.8	.87	20	7.3	8.5	3.5	1.0	.04	.00	.00	.00	.00
19	3.4	.80	18	7.0	8.2	3.1	.92	.03	.00	.00	.00	.00
20	3.1	.75	17	6.8	8.1	2.9	.88	.00	.00	.00	.00	.00
21	2.8	.70	16	9.6	7.7	2.7	.80	.00	.00	.00	.00	.00
22	2.6	1.1	16	31	7.5	2.7	.73	.00	.00	.00	.00	.00
23	2.4	54	15	33	7.0	3.5	.61	.00	.00	.00	.00	.00
24	2.2	58	15	30	6.6	3.2	.50	.00	.00	.00	.00	.00
25	2.0	46	15	27	6.1	3.0	.40	.00	.00	.00	.00	.00
26	1.8	38	14	24	5.7	2.8	.34	.00	.00	.00	.00	.00
27	1.7	32	14	23	5.3	2.6	.29	.00	.00	.00	.00	.00
28	1.6	31	14	22	5.0	2.4	.24	.00	.00	.00	.00	.00
29	1.5	29	13	21	---	2.3	.21	.00	.00	.00	.00	.00
30	1.4	27	13	20	---	2.1	.44	.00	.00	.00	.00	.00
31	1.3	---	13	19	---	2.0	---	.00	---	.00	.00	---
TOTAL	198.7	344.13	567	449.4	302.9	129.8	24.93	5.93	0.00	0.00	0.00	0.00
MEAN	6.41	11.5	18.3	14.5	10.8	4.19	.83	.19	.00	.00	.00	.00
MAX	18	58	26	33	18	6.3	1.9	1.1	.00	.00	.00	.00
MIN	1.3	.70	13	6.8	5.0	2.0	.21	.00	.00	.00	.00	.00
AC-FT	394	683	1120	891	601	257	49	12	.0	.0	.0	.0
CFSM	.21	.38	.60	.48	.36	.14	.03	.01	.00	.00	.00	.00
IN.	.24	.42	.70	.55	.37	.16	.03	.01	.00	.00	.00	.00

CAL YR 1988 TOTAL 4052.24 MEAN 11.1 MAX 58 MIN .07 AC-FT 8040 CFSM .37 IN. 4.98
WTR YR 1989 TOTAL 2022.79 MEAN 5.54 MAX 58 MIN .00 AC-FT 4010 CFSM .18 IN. 2.48

02264000 CYPRESS CREEK AT VINELAND, FL--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1963, 1966, 1969-74, 1976-80, 1982 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	COLOR (PLAT-INUM-COBALT UNITS) (00080)	OXYGEN, DIS-SOLVED (MG/L) (00300)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)
MAR												
13...	1115	118	3.5	16.5	200	4.4	1.6	2.5	8.3	3.5	<0.1	8.5
MAY												
08...	0900	129	4.1	17.5	280	3.8	1.7	2.3	10	2.1	<0.1	2.0

DATE	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	NITRO-GEN, NITRITE TOTAL (MG/L AS N) (00615)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS-PHOROUS TOTAL (MG/L AS P) (00665)	PHOS-PHORUS, ORTHO, TOTAL (MG/L AS P) (70507)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	ALUM-INUM, TOTAL RECOV-ERABLE (UG/L AS AL) (01105)	ARSENIC TOTAL (UG/L AS AS) (01002)
MAR											
13...	20	0.010	<0.020	<0.010	0.57	0.57	0.030	0.010	14	100	<1
MAY											
08...	25	0.010	<0.020	0.040	0.79	0.83	0.020	0.020	25	200	<1

DATE	BERYL-LIUM, TOTAL RECOV-ERABLE (UG/L AS BE) (01012)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD) (01027)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR) (01034)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU) (01042)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE) (01045)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB) (01051)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN) (01055)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG) (71900)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI) (01067)	SELE-NIUM, TOTAL (UG/L AS SE) (01147)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN) (01092)
MAR											
13...	<10	<1	<10	1	250	<5	14	--	4	<1	20
MAY											
08...	<10	<1	<10	1	570	<5	10	0.30	2	<1	<10

ST. JOHNS RIVER

KISSIMMEE RIVER BASIN

02264051 BLACK LAKE OUTLET AT S-101A, AT BUENA VISTA, FL

LOCATION.--Lat 28°22'28", long 81°31'01", in NE¼ sec.28, T.24 S., R.28 E., Orange County, Hydrologic Unit 03090101, on right upstream wingwall of drop culvert at Buena Vista Drive at Buena Vista, and 1.7 mi upstream from Bonnet Creek.

DRAINAGE AREA.--Indeterminate.

PERIOD OF RECORD.--October 1986 to current year.

GAGE.--Water-stage recorder and sharp-crested weir. Datum of gage is National Geodetic Vertical Datum of 1929 (Reedy Creek Improvement District bench mark).

REMARKS.--Records good except for those below 5.0 ft^3/s, which are poor.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 127 ft^3/s, Nov. 23, 1988, gage height 95.84 ft; no flow part of each day Apr. 10,11, May 4,5,7-9, Sept. 22, 1989; minimum gage height 94.28 ft, Sept. 22, 1989.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 127 ft^3/s, Nov. 23, gage height 95.84 ft; no flow part of each day Apr. 10,11, May 4,5,7-9, Sept. 22; minimum gage height 94.28 ft, Sept. 22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.29	.31	1.4	.40	.75	.57	.23	3.5	.39	.88	.30	1.2
2	.42	.31	.99	.40	.75	1.2	.17	.86	.29	.40	.30	1.6
3	7.1	.45	.76	.44	.75	1.1	.29	.41	.25	.36	.29	.44
4	3.4	2.5	.75	.43	.74	.86	.40	.36	.15	.29	.28	.48
5	1.1	1.1	.73	.41	.75	.66	.34	.30	.34	.28	.21	.48
6	.92	.63	.81	.40	.76	.54	.32	.32	.29	.72	.20	17
7	.90	.45	1.0	.40	.75	.70	.27	.23	.30	.87	.23	17
8	.61	.40	1.0	.40	.75	.60	.29	.27	.49	.41	.15	3.3
9	.57	.40	1.0	.41	.55	.46	.31	.29	.47	.33	.28	1.4
10	.51	.40	1.0	.45	.40	.42	.31	.37	.31	.30	.41	.99
11	.53	.40	3.9	.43	.40	.38	.33	.44	.29	.37	.30	.75
12	.50	.41	4.1	.49	.43	.40	.32	.25	.24	.42	.38	.74
13	.47	.46	1.5	.50	.51	.40	.32	.12	.21	.32	.61	.71
14	.37	.47	1.1	.52	.56	.47	1.6	.13	.27	.35	.85	.55
15	.38	.40	1.0	.50	.51	.50	3.5	.13	.28	.27	.41	.51
16	.33	.40	.96	.55	.47	.43	1.2	.10	.24	.24	.21	.49
17	.37	.40	.72	.55	.40	.38	.60	.12	.28	.28	.13	.45
18	.39	.38	.63	.50	.20	.27	.47	.13	.20	1.1	.36	.56
19	.40	.32	.63	.48	.23	.17	.76	.15	.14	1.4	.83	.51
20	.41	.31	.73	.57	.29	.15	.98	.15	.14	.56	.97	.47
21	.39	.32	.92	5.7	.31	.15	.52	.16	.29	.38	1.0	.41
22	.20	1.8	1.0	17	.44	.45	.46	.16	.92	1.8	.68	.30
23	.15	67	.82	3.5	.31	1.0	.40	.15	.53	1.8	.35	7.5
24	.16	19	.42	2.0	.22	.48	.40	.16	.78	1.0	.27	8.2
25	.18	6.7	.40	1.4	.27	.30	.41	.20	.46	.98	.58	3.8
26	.15	4.4	.40	1.2	.29	.29	.40	.38	.40	.46	.92	4.1
27	.19	3.5	.40	1.0	.29	.23	.38	.29	.48	.42	.74	2.5
28	.29	3.4	.40	.79	.34	.19	.30	.25	.75	.40	.42	1.6
29	.30	2.3	.40	.75	---	.20	.44	.40	1.5	.52	.42	1.2
30	.30	1.7	.40	.75	---	.25	3.0	1.2	.90	.52	.31	1.0
31	.29	---	.46	.74	---	.32	---	.86	---	.36	.30	---
TOTAL	22.57	121.02	30.73	44.06	13.42	14.52	19.72	12.84	12.58	18.79	13.69	80.24
MEAN	.73	4.03	.99	1.42	.48	.47	.66	.41	.42	.61	.44	2.67
MAX	7.1	67	4.1	17	.76	1.2	3.5	3.5	1.5	1.8	1.0	17
MIN	.15	.31	.40	.40	.20	.15	.17	.10	.14	.24	.13	.30

CAL YR 1988 TOTAL 615.10 MEAN 1.68 MAX 67 MIN .09
WTR YR 1989 TOTAL 404.18 MEAN 1.11 MAX 67 MIN .10

ST. JOHNS RIVER

KISSIMMEE RIVER BASIN

02264060 LATERAL 101 AT S-101, NEAR BUENA VISTA, FL

LOCATION.--Lat 28°22'15", long 81°31'45", in NE¼ sec.29, T.24 S., R.28 E., Orange County, Hydrologic Unit 03090101, on right bank at upstream side of control structure 101, 0.1 mi north of Buena Vista Drive, 0.5 mi upstream from mouth, and 0.9 mi west of Buena Vista.

DRAINAGE AREA.--Indeterminate.

PERIOD OF RECORD.--October 1986 to current year.

GAGE.--Water-stage and gate-opening recorder. Datum of gage is National Geodetic Vertical Daum of 1929 (Reedy Creek Improvement District bench mark). Auxiliary gage at downstream side of control structure 101.

REMARKS.--Estimated daily discharges: June 19 to July 25, Aug. 25 to Sept. 17. Records fair except for periods of estimated daily discharges, which are poor. Flow regulated by operation of structure 101. Discharge computed from relation between discharge and gate openings.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 290 ft^3/s, Nov. 23, 1988; maximum gage height, 90.59 ft, Nov. 23, 1988; no flow for many days most years; minimum gage height, 88.78 ft, Sept. 17, 1989.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.1	.00	23	8.0	12	1.8	1.3	7.6	.00	.05	.00	.02
2	8.4	.00	20	8.0	15	3.8	.31	5.7	.00	.30	.00	.10
3	34	.00	18	8.0	13	4.8	.44	2.1	.00	1.0	.00	.50
4	39	4.6	18	8.0	13	4.9	.19	1.9	.00	1.0	.00	5.0
5	11	5.7	15	8.0	12	4.8	.00	3.0	.00	1.0	.00	20
6	14	4.0	15	8.0	8.2	4.8	.00	1.4	.00	1.0	.00	10
7	13	3.0	15	7.1	15	4.8	.00	1.5	.00	1.0	.00	4.5
8	9.3	2.1	15	6.4	11	4.8	.00	.00	.00	1.0	.00	12
9	7.4	1.5	13	6.4	9.1	4.8	.00	.00	.00	1.0	.00	1.0
10	6.4	1.5	15	6.4	4.1	4.4	.00	.00	.00	1.0	.00	1.5
11	6.4	1.5	24	6.4	8.1	4.0	.00	.00	.00	1.0	.00	.30
12	6.4	1.5	30	6.4	8.8	3.0	.00	.00	.00	1.0	.00	.05
13	5.6	1.1	22	5.7	7.1	1.9	.00	.00	.00	.40	.00	.00
14	4.8	.25	22	4.8	4.1	1.5	.12	.00	.00	.10	.00	.00
15	3.9	.00	22	4.8	3.8	1.5	2.6	.00	.00	.10	.00	.00
16	3.0	.00	19	4.8	4.8	1.5	3.0	.00	.00	.10	.00	.00
17	3.0	.00	16	4.8	4.8	1.5	3.0	.00	.00	.10	.00	.00
18	3.0	.00	16	4.8	4.8	1.5	2.9	.00	.00	.10	.00	.00
19	3.0	.00	15	4.8	4.8	1.5	2.1	.00	.00	.10	.00	.00
20	3.0	.00	13	2.4	4.8	1.5	1.5	.00	.00	.10	.00	.00
21	3.0	.00	11	27	4.8	1.5	1.5	.00	.00	.10	.00	.00
22	3.0	1.2	12	67	4.8	1.5	1.5	.00	.00	.25	.00	.00
23	2.4	290	11	34	4.8	2.5	1.4	.00	.00	.50	.00	.25
24	1.5	83	17	28	3.8	3.0	1.0	.00	.00	1.0	.00	6.8
25	.62	54	7.1	24	2.4	3.0	.00	.00	.00	1.5	.00	8.1
26	.00	43	15	21	1.5	2.5	.00	.00	.00	1.5	.00	11
27	.00	35	7.1	18	1.5	1.5	.00	.00	.00	1.5	.00	7.1
28	.00	38	11	17	1.5	1.5	.00	.00	.00	1.0	.00	3.0
29	.00	27	13	20	---	1.5	.00	.00	.00	.00	.00	2.0
30	.00	25	9.7	16	---	1.5	1.0	.00	.00	.00	.00	1.8
31	.00	---	8.0	12	---	1.5	---	.00	---	.00	.00	---
TOTAL	202.22	622.95	487.9	408.0	193.4	84.6	23.86	23.20	0.00	18.80	0.00	95.02
MEAN	6.52	20.8	15.7	13.2	6.91	2.73	.80	.75	.00	.61	.00	3.17
MAX	39	290	30	67	15	4.9	3.0	7.6	.00	1.5	.00	20
MIN	.00	.00	7.1	2.4	1.5	1.5	.00	.00	.00	.00	.00	.00

CAL YR 1988 TOTAL 4343.76 MEAN 11.9 MAX 290 MIN .00
WTR YR 1989 TOTAL 2159.95 MEAN 5.92 MAX 290 MIN .00

KISSIMMEE RIVER BASIN

02264100 BONNET CREEK NEAR VINELAND, FL

LOCATION.--Lat 28°19'58", long 81°31'20", in NW¼ sec.9, T.25 S., R.28 E., Osceola County, Hydrologic Unit 03090101, on downstream side of bridge on U.S. Highway 192, about 1 mi upstream from Reedy Creek Swamp, and 4.5 mi south of Vineland.

DRAINAGE AREA.--56.1 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1966 to current year. Results of miscellaneous discharge measurements for some periods prior to May 1966 are unpublished and available in files of the Orlando Subdistrict office.

GAGE.--Water-stage recorder and steel sheet-pile weir with sluice gate. Datum of gage is National Geodetic Vertical Datum of 1929 (Florida Department of Transportation bench mark). Prior to Oct. 1, 1968, at datum 37.96 ft higher.

REMARKS.--Estimated daily discharges: Oct. 12 to Nov. 22. Records fair. Since October 1968, flow regulated by automatic gates upstream and since December 1970, by control structure S-11-temporary 0.5 mi downstream. Natural flow of stream affected by canals and control structures above station which divert an undetermined amount of water into the Reedy Creek basin. From Oct. 13, 1983 to Feb. 1, 1985 structure S-11-temporary did not regulate the stream because of a washout of the bank around the structure.

AVERAGE DISCHARGE.--23 years, 22.8 ft^3/s, 16,520 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,230 ft^3/s, Nov. 23, 1988, gage height, 76.42 ft; maximum gage height, 78.58 ft, Nov. 1, 1969; no flow for many days in most years; minimum gage height, 68.18 ft, Oct. 18,23,25, 1985, estimated, result of washout around structure.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Sept. 11, 1960, reached a stage of 42.5 ft, datum then in use, from floodmarks, discharge, 1,200 ft^3/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,230 ft^3/s, Nov. 23, gage height, 76.42 ft; minimum 1.7 ft^3/s, Aug. 23,24, gage height, 72.76 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	4.7	34	18	21	11	6.4	8.4	3.5	3.3	3.8	3.8
2	23	4.5	31	18	23	14	6.2	9.5	3.7	3.5	3.6	5.4
3	51	8.6	29	20	21	14	6.2	7.0	3.7	4.6	3.6	4.0
4	44	18	28	17	21	14	5.8	5.6	3.8	3.7	3.5	4.1
5	27	30	26	16	20	14	5.4	4.9	4.0	4.3	3.5	4.1
6	24	22	26	16	17	13	5.2	4.5	4.0	5.2	3.4	80
7	22	16	25	16	21	13	5.6	4.4	4.2	5.0	3.2	43
8	19	14	24	16	19	12	5.6	4.2	4.1	4.9	3.2	11
9	17	12	23	16	17	11	5.3	4.1	3.2	5.0	3.0	50
10	16	9.5	23	16	13	10	5.3	3.9	2.6	5.3	2.9	5.1
11	16	7.6	34	16	15	8.5	4.9	3.2	2.7	4.9	2.9	8.4
12	15	6.8	38	15	17	8.5	5.0	3.2	2.9	4.9	2.9	7.5
13	13	6.4	32	14	15	8.2	4.9	3.2	3.0	4.9	2.8	6.2
14	11	6.1	33	9.7	13	7.7	4.9	3.4	3.0	3.1	2.8	5.9
15	10	5.8	30	10	13	7.3	5.0	3.2	3.1	2.9	2.5	5.1
16	9.2	5.8	28	11	14	8.2	7.6	3.5	3.2	2.9	2.3	4.6
17	8.7	5.7	25	11	14	8.4	7.1	3.7	3.3	2.9	2.3	4.5
18	8.4	5.6	25	11	13	8.6	6.6	3.6	3.4	3.4	2.4	4.5
19	8.2	5.5	24	11	13	8.5	6.5	3.5	3.4	3.2	2.4	4.2
20	8.0	5.4	23	11	13	8.3	6.2	2.8	3.5	3.1	2.6	4.2
21	7.8	5.3	21	28	14	8.3	5.7	3.2	3.5	3.1	2.3	4.2
22	7.4	5.2	22	86	13	8.2	5.3	3.2	3.3	3.4	2.3	5.3
23	7.0	549	20	43	12	11	5.4	3.4	3.3	3.4	2.0	5.4
24	6.5	133	26	36	11	9.9	5.6	3.5	4.3	5.2	1.8	5.4
25	6.3	83	17	32	11	9.1	5.7	3.5	3.3	5.1	2.3	20
26	6.0	63	22	30	10	9.2	5.3	3.2	3.4	4.7	2.1	27
27	5.8	52	18	27	10	9.1	5.2	2.9	3.4	4.2	2.1	18
28	5.6	51	20	26	10	8.6	4.9	3.0	3.6	3.9	2.2	12
29	5.3	41	21	28	---	8.6	5.9	3.2	3.2	5.4	2.3	11
30	5.1	37	18	25	---	8.6	6.8	3.3	3.3	4.1	2.4	9.7
31	4.9	---	17	22	---	8.5	---	3.3	---	4.3	2.5	---
TOTAL	437.2	1219.5	783	671.7	424	307.3	171.5	125.5	102.9	127.8	83.9	383.6
MEAN	14.1	40.6	25.3	21.7	15.1	9.91	5.72	4.05	3.43	4.12	2.71	12.8
MAX	51	549	38	86	23	14	7.6	9.5	4.3	5.4	3.8	80
MIN	4.9	4.5	17	9.7	10	7.3	4.9	2.8	2.6	2.9	1.8	3.8
AC-FT	867	2420	1550	1330	841	610	340	249	204	253	166	761

CAL YR 1988 TOTAL 8585.1 MEAN 23.5 MAX 549 MIN 4.5 AC-FT 17030
WTR YR 1989 TOTAL 4837.9 MEAN 13.3 MAX 549 MIN 1.8 AC-FT 9600

02264100 BONNET CREEK NEAR VINELAND, FL--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1971, 1973, 1976, 1978 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	COLOR (PLAT- INUM- COBALT UNITS) (00080)	OXYGEN, DIS- SOLVED (MG/L) (00300)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LINITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)
MAR 13...	1135	116	6.1	17.5	140	4.0	9.6	3.2	7.2	3.2	14	11
MAY 08...	0945	147	6.4	24.0	80	1.7	14	3.5	7.6	2.7	33	10
SEP 25...	1100	182	6.6	26.5	50	1.0	20	3.1	10	2.6	50	8.2

DATE	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	NITRO- GEN, NITRITE TOTAL (MG/L AS N) (00615)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS- PHOROUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P) (70507)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL) (01105)	ARSENIC TOTAL (UG/L AS AS) (01002)
MAR 13...	19	0.010	0.060	<0.010	0.49	0.49	0.060	0.020	14	300	<1
MAY 08...	16	<0.010	<0.020	<0.010	0.38	0.38	0.040	0.030	12	200	<1
SEP 25...	18	<0.010	0.020	0.030	0.62	0.65	0.030	0.020	--	40	<1

DATE	BERYL- LIUM, TOTAL RECOV- ERABLE (UG/L AS BE) (01012)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD) (01027)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI) (01067)	SELE- NIUM, TOTAL (UG/L AS SE) (01147)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)
MAR 13...	<10	<1	<10	2	330	<5	<10	--	4	<1	20
MAY 08...	<10	<1	<10	2	320	<5	<10	<0.10	1	<1	<10
SEP 25...	<10	<1	<10	2	200	<1	<10	0.30	<1	<1	10

KISSIMMEE RIVER BASIN

02264495 SHINGLE CREEK AT CAMPBELL, FL

LOCATION.--Lat 28°16'01", long 81°26'53", in SE¼ sec.31, T.25 S., R.29 E., Osceola County, Hydrologic Unit 03090101, on right bank 200 ft downstream from bridge on county road, 300 ft downstream from Atlantic Coast Line Railroad bridge, 0.8 mi northeast of Campbell, and 2.5 mi upstream from Lake Tohopekaliga.

DRAINAGE AREA.--180 mi^2, approximately, includes part of watershed in Reedy Creek Swamp.

PERIOD OF RECORD.--October 1968 to current year.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929. Water-stage recorder for Lake Tohopekaliga at Kissimmee (station 02264900) used as auxiliary gage for this station.

REMARKS.--Estimated daily discharges: Oct. 22 to Nov. 16, Mar. 28 to Mar. 31. Records poor. Natural flow of stream affected by several canals, levees, and control structures which divert an undetermined amount of water into Shingle Creek above station or into the Reedy Creek basin.

AVERAGE DISCHARGE.--21 years, 138 ft^3/s, 99,980 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, 2,070 ft^3/s, Apr. 1, 1987, gage height, 60.78 ft; minimum daily discharge, 3.1 ft^3/s, May 9,10, 1971; minimum gage height, 49.78 ft, May 10, 1971.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 912 ft^3/s, Nov 26, gage height, 57.51 ft; minimum daily discharge, 28 ft^3/s, June 6; minimum gage height, 51.94 ft, June 6,21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	98	33	597	82	162	44	52	115	36	72	92	81
2	93	32	492	82	126	56	46	88	34	70	70	88
3	117	30	395	80	103	57	41	70	33	66	61	97
4	174	39	314	84	101	57	43	66	32	79	61	102
5	196	59	257	72	92	56	43	61	33	64	48	114
6	202	82	218	72	93	54	47	55	28	101	46	115
7	192	91	187	73	90	61	39	54	36	103	44	178
8	176	94	166	71	90	68	39	53	38	73	42	159
9	139	90	145	71	92	67	42	49	35	59	44	149
10	110	77	125	77	86	68	38	43	37	54	81	135
11	96	63	143	73	80	61	47	51	38	72	130	125
12	91	55	237	68	78	52	47	48	37	96	147	101
13	90	51	226	64	75	50	45	49	35	82	217	100
14	85	48	226	64	70	51	41	44	34	63	170	93
15	79	45	234	64	70	52	44	48	35	50	139	88
16	77	54	232	67	63	52	49	47	32	58	135	84
17	74	52	211	67	60	51	49	45	34	50	132	91
18	68	53	186	65	58	48	48	49	36	57	128	94
19	63	48	165	65	53	51	44	44	31	73	123	106
20	61	47	149	67	49	48	41	41	33	60	166	107
21	56	53	139	109	43	44	44	40	34	49	174	107
22	53	64	118	528	51	44	42	37	37	55	137	102
23	51	657	105	572	54	46	36	37	36	62	132	120
24	46	830	104	476	48	52	34	36	38	59	125	167
25	41	853	94	450	46	49	32	37	44	51	116	221
26	37	900	99	472	45	47	31	37	44	45	103	401
27	35	867	97	465	40	46	29	36	39	44	91	520
28	32	775	93	409	41	45	31	36	41	42	93	549
29	32	693	92	339	---	43	31	36	86	43	93	553
30	33	647	89	267	---	48	63	37	81	73	91	508
31	34	---	90	209	---	54	---	36	---	65	86	---
TOTAL	2731	7482	6025	5724	2059	1622	1258	1525	1167	1990	3317	5455
MEAN	88.1	249	194	185	73.5	52.3	41.9	49.2	38.9	64.2	107	182
MAX	202	900	597	572	162	68	63	115	86	103	217	553
MIN	32	30	89	64	40	43	29	36	28	42	42	81
AC-FT	5420	14840	11950	11350	4080	3220	2500	3020	2310	3950	6580	10820

CAL YR 1988 TOTAL 70003 MEAN 191 MAX 1080 MIN 30 AC-FT 138900
WTR YR 1989 TOTAL 40355 MEAN 111 MAX 900 MIN 28 AC-FT 80040

02266025 REEDY CREEK AT S-46 NEAR VINELAND, FL

LOCATION.--Lat 28°24'18", long 81°36'42", in NE¼ sec.16, T.24 S., R.27 E., Orange County, Hydrologic Unit 03090101, on right upstream wingwall of control structure 46, 6.6 mi west of Vineland.

DRAINAGE AREA.--20 mi^2, approximately.

PERIOD OF RECORD.--June 13, 1969 to Sept. 7, 1972 (gage heights only). Oct. 1, 1986 to current year. Records prior to Oct. 1, 1986 are unpublished and available in files of the Orlando Subdistrict office.

GAGE.--Water-stage and gate-opening recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (Reedy Creek Improvement District bench mark). Auxiliary gage at downstream side of control structure 46.

REMARKS.--Estimated daily discharges: Oct. 1-22, Jan. 24 to Mar. 12, leakage through gates. Records good except for estimated daily discharges, which are poor Flow regulated by operation of structure 46. Discharge computed from relation between discharge and gate openings. At high stages interconnection exists between Reedy Creek, Whittenhorse Creek, and Boggy Creek.

EXTREMES FOR PERIOD OF PERIOD.--Maximum daily discharge 54 ft^3/s, Mar. 14, 1988; maximum gage height, 96.51 ft, Mar. 31, 1987; no flow for many days each year; minimum gage height, 92.11 ft, July 13, 1989.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.01	.00	12	.00	.02	.01	.00	.00	.00	.00	.00	.00
2	.01	.00	2.9	.00	.02	.01	.00	.00	.00	.00	.00	.00
3	.01	.00	.66	.00	.02	.01	.00	.00	.00	.00	.00	.00
4	.01	.00	.42	.00	.02	.01	.00	.00	.00	.00	.00	.00
5	.01	.00	.79	.00	.02	.01	.00	.00	.00	.00	.00	.00
6	.01	.00	.83	.00	.02	.01	.00	.00	.00	.00	.00	.00
7	.01	.00	.46	.00	.02	.01	.00	.00	.00	.00	.00	.00
8	.01	.00	.00	.00	.02	.01	.00	.00	.00	.00	.00	.00
9	.01	.00	.00	.00	.02	.01	.00	.00	.00	.00	.00	.00
10	.01	.00	.00	.00	.02	.01	.00	.00	.00	.00	.00	.00
11	.01	.00	.79	.00	.01	.01	.00	.00	.00	.00	.00	.00
12	.01	.00	2.4	.00	.01	.01	.00	.00	.00	1.9	.00	.00
13	.01	.00	1.5	.00	.01	.00	.00	.00	.00	.72	.00	.00
14	.01	.00	.83	.00	.01	.00	.00	.00	.00	.00	.00	.00
15	.01	.00	.00	.00	.01	.00	.00	.00	.00	.00	.00	.00
16	.01	.00	.04	.00	.01	.00	.00	.00	.00	.00	.00	.00
17	.01	.00	.04	.00	.01	.00	.00	.00	.00	.00	.00	.00
18	.01	.00	.08	.00	.01	.00	.00	.00	.00	.00	.00	.00
19	.01	.00	.17	.00	.01	.00	.00	.00	.00	.00	.00	.00
20	.01	.00	.00	.00	.01	.00	.00	.00	.00	.00	.00	.00
21	.01	.00	.00	.00	.01	.00	.00	.00	.00	.00	.00	.00
22	.01	.00	.00	.08	.01	.00	.00	.00	.00	.00	.00	.00
23	.00	3.7	.00	.14	.01	.00	.00	.00	.00	.00	.00	.00
24	.00	7.0	.00	.02	.01	.00	.00	.00	.00	.00	.00	.00
25	.00	6.2	.00	.02	.01	.00	.00	.00	.00	.00	.00	.00
26	.00	6.0	.00	.02	.01	.00	.00	.00	.00	.00	.00	.00
27	.00	5.8	.00	.02	.01	.00	.00	.00	.00	.00	.00	.00
28	.00	5.9	.00	.02	.01	.00	.00	.00	.00	.00	.00	.00
29	.00	7.8	.00	.02	---	.00	.00	.00	.00	.00	.00	.00
30	.00	11	.00	.02	---	.00	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.02	---	.00	---	.00	---	.00	.00	---
TOTAL	0.22	53.40	23.91	0.38	0.38	0.12	0.00	0.00	0.00	2.62	0.00	0.00
MEAN	.007	1.78	.77	.012	.014	.004	.00	.00	.00	.085	.00	.00
MAX	.01	11	12	.14	.02	.01	.00	.00	.00	1.9	.00	.00
MIN	.00	.00	.00	.00	.01	.00	.00	.00	.00	.00	.00	.00

CAL YR 1988 TOTAL 215.01 MEAN .59 MAX 54 MIN .00
WTR YR 1989 TOTAL 81.03 MEAN .22 MAX 12 MIN .00

SOUTH FLORIDA

KISSIMMEE RIVER BASIN

02266200 WHITTENHORSE CREEK NEAR VINELAND, FL

LOCATION.--Lat 28°23'05", long 81°37'00", in NW¼ sec.21, T.24 S., R.27 E., Orange County, Hydrologic Unit 03090101, near center of channel, 12 ft downstream from culverts on Hartzog Road, 7 mi west of Vineland.

DRAINAGE AREA.--12.4 mi^2.

PERIOD OF RECORD.--May 1966 to current year.

WATER-DISCHARGE RECORDS

GAGE.--Water-stage recorder. Datum of gage is 7.23 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good.

AVERAGE DISCHARGE.--23 years, 3.18 ft^3/s, 3.48 in/yr, 2,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 62 ft^3/s, Mar. 31, Apr. 1,2, 1987, gage height, 94.82 ft; no flow for many days each year; creek dry at gage for many days in most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 39 ft^3/s, Nov. 26,27, gage height, 94.60 ft; no flow for many days; creek dry at gage for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.3	.62	33	8.4	12	1.7	.03	.00	.00	.00	.00	.00
2	4.8	.56	31	7.9	11	2.0	.00	.00	.00	.00	.00	.00
3	8.0	.52	28	7.7	10	2.1	.00	.00	.00	.00	.00	.00
4	10	1.3	27	7.4	9.4	2.0	.00	.00	.00	.00	.00	.00
5	9.8	1.4	25	6.8	8.7	2.1	.02	.00	.00	.00	.00	.00
6	9.0	1.6	23	6.5	8.2	1.9	.01	.00	.00	.00	.00	.00
7	8.2	1.5	22	6.1	7.7	1.8	.00	.00	.00	.00	.00	.00
8	7.5	1.5	21	5.9	7.3	1.9	.00	.00	.00	.00	.00	.16
9	6.8	1.4	20	5.5	6.9	1.8	.00	.00	.00	.00	.00	.57
10	6.2	1.4	18	5.2	6.2	1.7	.00	.00	.00	.00	.00	.79
11	5.6	1.4	19	5.0	5.8	1.6	.00	.00	.00	.00	.00	.81
12	4.9	1.3	22	4.8	5.2	1.5	.00	.00	.00	.00	.00	.73
13	4.4	1.2	21	4.5	4.8	1.4	.00	.00	.00	.00	.00	.68
14	3.9	1.2	21	4.3	4.7	1.3	.00	.00	.00	.00	.00	.60
15	3.5	1.1	20	4.2	4.7	1.3	.00	.00	.00	.00	.00	.54
16	3.1	1.1	19	3.9	4.3	1.2	.00	.00	.00	.00	.00	.53
17	2.8	.98	18	3.8	4.1	1.1	.00	.00	.00	.00	.00	.58
18	2.6	.90	17	3.6	3.7	1.0	.00	.00	.00	.00	.00	.60
19	2.3	.85	16	3.3	3.6	.87	.00	.00	.00	.00	.00	.69
20	2.1	.79	15	3.2	3.4	.77	.00	.00	.00	.00	.00	.64
21	1.9	.75	14	4.2	3.2	.69	.00	.00	.00	.00	.00	.55
22	1.7	.96	13	11	3.0	.58	.00	.00	.00	.00	.00	.61
23	1.5	21	12	14	2.6	.51	.00	.00	.00	.00	.00	1.6
24	1.4	32	12	15	2.3	.46	.00	.00	.00	.00	.00	2.0
25	1.2	36	12	15	2.1	.35	.00	.00	.00	.00	.00	2.8
26	1.1	38	11	15	2.0	.30	.00	.00	.00	.00	.00	4.6
27	.95	39	10	15	1.9	.23	.00	.00	.00	.00	.00	5.0
28	.88	38	10	14	1.7	.18	.00	.00	.00	.00	.00	5.7
29	.78	36	9.4	14	---	.12	.00	.00	.00	.00	.00	5.5
30	.70	35	9.0	13	---	.09	.00	.00	.00	.00	.00	5.1
31	.67	---	8.7	12	---	.08	---	.00	---	.00	.00	---
TOTAL	123.58	299.33	557.1	250.2	150.5	34.63	0.06	0.00	0.00	0.00	0.00	41.38
MEAN	3.99	9.98	18.0	8.07	5.37	1.12	.002	.00	.00	.00	.00	1.38
MAX	10	39	33	15	12	2.1	.03	.00	.00	.00	.00	5.7
MIN	.67	.52	8.7	3.2	1.7	.08	.00	.00	.00	.00	.00	.00
AC-FT	245	594	1110	496	299	69	.1	.0	.0	.0	.0	82
CFSM	.32	.80	1.45	.65	.43	.09	.00	.00	.00	.00	.00	.11
IN.	.37	.90	1.67	.75	.45	.10	.00	.00	.00	.00	.00	.12

CAL YR 1988 TOTAL 3042.65 MEAN 8.31 MAX 39 MIN .00 AC-FT 6040 CFSM .67 IN. 9.13
WTR YR 1989 TOTAL 1456.78 MEAN 3.99 MAX 39 MIN .00 AC-FT 2890 CFSM .32 IN. 4.37

02266200 WHITTENHORSE CREEK NEAR VINELAND, FL--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1968-72, 1974, 1976-80, 1982 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	COLOR (PLAT-INUM-COBALT UNITS) (00080)	OXYGEN, DIS-SOLVED (MG/L) (00300)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY LAB (MG/L AS CACO3) (90410)
MAR											
13...	1345	79	3.6	18.5	320	4.5	3.6	1.8	4.8	0.60	<0.1
SEP											
25...	1150	106	4.4	24.0	480	2.1	5.7	2.5	8.0	1.7	<0.1

DATE	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	NITRO-GEN, NITRITE TOTAL (MG/L AS N) (00615)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS-PHOROUS TOTAL (MG/L AS P) (00665)	PHOS-PHORUS, ORTHO, TOTAL (MG/L AS P) (70507)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	ALUM-INUM, TOTAL RECOV-ERABLE (UG/L AS AL) (01105)	ARSENIC TOTAL (UG/L AS AS) (01002)
MAR											
13...	1.1	14	0.010	<0.020	<0.010	1.3	0.030	0.010	36	100	<1
SEP											
25...	6.1	17	0.010	<0.020	<0.010	1.8	<0.020	0.020	--	200	<1

DATE	BERYL-LIUM, TOTAL RECOV-ERABLE (UG/L AS BE) (01012)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD) (01027)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR) (01034)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU) (01042)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE) (01045)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB) (01051)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN) (01055)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG) (71900)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI) (01067)	SELE-NIUM, TOTAL (UG/L AS SE) (01147)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN) (01092)
MAR											
13...	<10	<1	<10	2	370	<5	13	--	3	<1	20
SEP											
25...	<10	<1	<10	2	660	1	20	0.20	<1	<1	10

SOUTH FLORIDA

KISSIMMEE RIVER BASIN

02266205 WHITTENHORSE CREEK AT S-411, NEAR VINELAND, FL

LOCATION.--Lat 28°23'34", long 81°36'40", in SE¼ sec.16, T.24 S., R.27 E., Orange County, Hydrologic Unit 03090101, on upstream side of control structure 411, 0.2 mi upstream from mouth, and 6.6 mi west of Vineland.

DRAINAGE AREA.--13 mi^2, approximately.

PERIOD OF RECORD.--October 1986 to current year.

GAGE.--Water-stage and gate-opening recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (Reedy Creek Improvement District bench mark). Auxiliary water-stage recorder at downstream side of control structure.

REMARKS.--Estimated daily discharges: Oct. 11 to Nov. 9, Mar. 13 to Aug. 9, Aug. 13-15, Aug. 17 to Sept. 30, leakage through gates. Records fair except those below 3 ft^3/s and estimated daily discharges, which are poor. Flow regulated by operation of structure 411. Daily discharge computed from relation between discharge and gate openings. At high stages interconnection exists between Reedy Creek, Whittenhorse Creek, and Boggy Creek.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge 35 ft^3/s, Mar. 19, 1988; maximum gage height, 97.07 ft, Nov. 24, 1988; minimum daily discharge, 0.01 ft^3/s, Aug. 10-21, 1989; minimum gage height, 92.97 ft, June 21, 1989.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.2	.50	17	1.5	2.1	1.0	.20	.06	.15	.30	.20	.15
2	1.1	.50	15	1.5	1.9	1.1	.20	.05	.15	.30	.20	.15
3	.90	.50	13	1.5	1.7	1.1	.20	.05	.15	.35	.15	.15
4	.53	.50	12	1.4	1.7	1.1	.20	.05	.20	.35	.15	.20
5	.54	.50	11	1.3	1.6	1.1	.20	.04	.20	.35	.10	.20
6	.50	.50	9.5	1.3	1.6	1.0	.15	.04	.20	.35	.09	.20
7	.51	.50	5.3	1.3	1.6	1.0	.15	.03	.20	.35	.07	.20
8	.48	.50	3.5	1.3	1.6	1.0	.15	.03	.20	.35	.04	.25
9	.45	.50	3.2	1.3	1.5	1.0	.15	.03	.20	.40	.02	.25
10	.45	.65	2.8	1.3	1.4	.91	.15	.04	.20	.40	.01	.25
11	.50	1.1	4.5	1.3	1.3	.84	.15	.04	.20	.40	.01	.30
12	.50	1.1	7.1	1.3	1.2	.81	.15	.05	.20	.40	.01	.30
13	.50	1.1	5.8	1.3	1.3	.70	.15	.05	.20	.40	.01	.30
14	.50	1.1	4.8	1.2	1.3	.70	.15	.06	.20	.40	.01	.30
15	.50	1.1	4.3	1.2	1.3	.70	.15	.06	.20	.40	.01	.30
16	.50	1.1	3.9	1.2	1.3	.60	.10	.07	.25	.40	.01	.35
17	.50	1.1	3.4	1.2	1.3	.60	.10	.08	.25	.40	.01	.35
18	.50	1.1	2.9	1.1	1.3	.50	.10	.08	.25	.40	.01	.35
19	.50	1.2	2.5	1.1	1.2	.50	.10	.09	.25	.40	.01	.35
20	.50	1.1	2.2	1.1	1.3	.50	.10	.09	.25	.35	.01	.35
21	.50	1.1	2.1	1.1	1.2	.40	.10	.10	.25	.35	.01	.35
22	.50	1.2	1.9	1.3	1.2	.40	.10	.10	.30	.35	.02	.35
23	.50	1.5	1.8	2.0	1.1	.30	.09	.10	.30	.35	.04	.30
24	.50	12	1.8	3.0	1.0	.30	.09	.10	.30	.35	.05	.30
25	.50	17	1.7	3.3	.99	.30	.08	.10	.30	.35	.06	.30
26	.50	17	1.6	3.3	.94	.20	.08	.10	.30	.35	.07	.30
27	.50	17	1.6	3.2	.97	.20	.08	.15	.30	.35	.09	.30
28	.50	22	1.6	3.1	.96	.20	.07	.15	.30	.30	.10	.30
29	.50	20	1.6	2.9	---	.20	.07	.15	.30	.30	.10	.30
30	.50	19	1.6	2.5	---	.20	.06	.15	.30	.25	.10	.30
31	.50	---	1.6	2.3	---	.20	---	.15	---	.25	.15	---
TOTAL	17.16	144.05	152.6	53.7	37.86	19.66	3.82	2.44	7.05	11.00	1.92	8.35
MEAN	.55	4.80	4.92	1.73	1.35	.63	.13	.079	.23	.35	.062	.28
MAX	1.2	22	17	3.3	2.1	1.1	.20	.15	.30	.40	.20	.35
MIN	.45	.50	1.6	1.1	.94	.20	.06	.03	.15	.25	.01	.15

CAL YR 1988 TOTAL 1064.21 MEAN 2.91 MAX 35 MIN .45
WTR YR 1989 TOTAL 459.61 MEAN 1.26 MAX 22 MIN .01

KISSIMMEE RIVER BASIN

02266291 LATERAL 405 AT S-405A, NEAR DOCTOR PHILLIPS, FL

LOCATION.--Lat 28°25'37", long 81°36'19" in SW¼ sec.3, T.24 S., R.27 E., Orange County, Hydrologic Unit 03090101, on right upstream wingwall of control structure 405A, 200 ft upstream from Lateral 407, and 6.4 mi west of Doctor Phillips.

DRAINAGE AREA.--10 mi^2, approximately.

PERIOD OF RECORD.--June 13, 1969 to Sept. 7, 1972 (gage heights and periodic discharge measurements only), Oct. 1, 1986 to current year. Records prior to Oct. 1, 1986 are unpublished and available in files of the Orlando Subdistrict office.

GAGE.--Water-stage and gate-opening recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (Reedy Creek Improvement District bench mark). Auxiliary water-stage recorder at downstream side of control structure.

REMARKS.--Estimated daily discharges: Oct. 1-23, Jan. 17-26, Feb. 10 to Apr. 2, and Apr. 5 to May 7, which are leakage through gates; May 9-21. Records fair except those for estimated daily discharges, which are poor. Flow regulated by operation of structure 405A. Discharge computed from relation between discharge and gate openings.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 57 ft^3/s, Mar. 19, 1988; maximum gage height, 96.45 ft, Mar. 31, 1987; no flow for many days in 1989 water year; minimum gage height observed, 90.86 ft, Aug. 9, 1989.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.25	.00	4.5	1.5	9.2	.50	.50	.40	.00	.00	.00	.00
2	.25	.00	3.3	1.5	9.2	.50	.50	.40	.00	.00	.00	.00
3	.25	.00	2.7	1.5	8.4	.50	5.3	.40	.00	.00	.00	.00
4	.25	.00	2.9	1.5	8.4	.50	4.2	.40	.00	.00	.00	.00
5	.25	.00	3.0	1.5	8.4	.50	.40	.40	.00	.00	.00	.00
6	.25	.00	2.8	1.5	7.7	.50	.40	.40	.00	.00	.00	.00
7	.25	.00	2.2	1.5	7.7	.50	.40	.40	.00	.00	.00	.00
8	.25	.00	2.2	1.5	7.7	.50	.40	2.5	.00	.00	.00	.00
9	.25	.00	2.2	1.5	12	.50	.40	3.3	.00	.00	.00	.00
10	.25	.00	2.2	1.5	8.8	.50	.40	2.2	.00	.00	.00	.00
11	.25	.00	5.2	1.5	.50	.50	.40	1.7	.00	.00	.00	.00
12	.25	.00	9.8	1.5	.50	.50	.40	1.3	.00	.00	.00	.00
13	.25	.00	7.7	1.5	.50	.50	.40	1.1	.00	.00	.00	.00
14	.25	.00	5.9	1.5	.50	.50	.40	1.0	.00	.00	.00	.00
15	.25	.00	4.9	1.5	.50	.50	.40	.90	.00	.00	.00	.00
16	.25	.00	4.1	1.5	.50	.50	.40	.80	.00	.00	.00	.00
17	.25	.00	4.1	1.5	.50	.50	.40	.60	.00	.00	.00	.00
18	.25	.00	3.2	1.5	.50	.50	.40	.50	.00	.00	.00	.00
19	.25	.00	2.5	1.5	.50	.50	.40	.40	.00	.00	.00	.00
20	.25	.00	2.2	1.5	.50	.50	.40	.30	.00	.00	.00	.00
21	.25	.00	2.2	1.5	.50	.50	.40	.10	.00	.00	.00	.00
22	.25	1.6	2.2	1.5	.50	.50	.40	.00	.00	.00	.00	.00
23	.25	2.9	2.2	11	.50	.50	.40	.00	.00	.00	.00	.00
24	14	7.1	2.2	11	.50	.50	.40	.00	.00	.00	.00	.00
25	6.9	10	2.2	11	.50	.50	.40	.00	.00	.00	.00	.00
26	.00	10	2.2	11	.50	.50	.40	.00	.00	.00	.00	.00
27	.00	9.3	1.8	11	.50	.50	.40	.00	.00	.00	.00	.00
28	.00	9.4	1.5	11	.50	.50	.40	.00	.00	.00	.00	.00
29	.00	9.7	1.5	10	---	.50	.40	.00	.00	.00	.00	.00
30	.00	5.6	1.5	10	---	.50	.40	.00	.00	.00	.00	.00
31	.00	---	1.5	10	---	.50	---	.00	---	.00	.00	---
TOTAL	26.65	65.60	98.6	129.0	96.50	15.50	20.90	19.50	0.00	0.00	0.00	0.00
MEAN	.86	2.19	3.18	4.16	3.45	.50	.70	.63	.00	.00	.00	.00
MAX	14	10	9.8	11	12	.50	5.3	3.3	.00	.00	.00	.00
MIN	.00	.00	1.5	1.5	.50	.50	.40	.00	.00	.00	.00	.00

CAL YR 1988 TOTAL 1055.25 MEAN 2.88 MAX 57 MIN .00
WTR YR 1989 TOTAL 472.25 MEAN 1.29 MAX 14 MIN .00

02266294 LATERAL 405 BELOW S-405, NEAR VINELAND, FL

WATER-QUALITY RECORDS

LOCATION.--Lat 28°23'39", long 81°35'07", in SW¼ sec.14, T. 24S., R. 27E., Orange County, Hydrologic Unit 03090101, at downstream side of structure S-405 on Bear Island Road, 1.7 mi south of Walt Disney World's Magic Kingdom, and 6 mi southwest of Windermere.

DRAINAGE AREA.--Indeterminate.

PERIOD OF RECORD.--Water years 1971, 1972, 1975 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	COLOR (PLAT-INUM-COBALT UNITS) (00080)	OXYGEN, DIS-SOLVED (MG/L) (00300)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)
MAR												
13...	0835	118	6.4	16.5	320	4.7	13	4.0	7.3	3.3	17	10
MAY												
08...	0830	171	6.4	25.0	200	3.0	17	4.5	10	3.8	28	14
SEP												
25...	0905	213	6.7	27.0	100	3.9	24	4.8	9.4	3.2	49	22

DATE	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	NITRO-GEN, NITRITE TOTAL (MG/L AS N) (00615)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS-PHOROUS TOTAL (MG/L AS P) (00665)	PHOS-PHORUS, ORTHO, TOTAL (MG/L AS P) (70507)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	ALUM-INUM, TOTAL RECOV-ERABLE (UG/L AS AL) (01105)	ARSENIC TOTAL (UG/L AS AS) (01002)
MAR											
13...	27	0.020	0.230	0.140	1.4	1.5	0.190	0.060	33	300	<1
MAY											
08...	26	0.010	0.060	0.060	1.8	1.9	0.120	0.050	30	200	2
SEP											
25...	20	0.010	<0.020	0.060	1.0	1.1	0.060	0.020	--	40	5

DATE	BERYL-LIUM, TOTAL RECOV-ERABLE (UG/L AS BE) (01012)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD) (01027)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR) (01034)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU) (01042)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE) (01045)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB) (01051)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN) (01055)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG) (71900)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI) (01067)	SELE-NIUM, TOTAL (UG/L AS SE) (01147)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN) (01092)
MAR											
13...	<10	<1	<10	7	620	<5	18	--	3	<1	20
MAY											
08...	<10	1	<10	4	520	<5	20	0.70	3	<1	20
SEP											
25...	<10	<1	<10	4	170	<1	10	0.30	<1	<1	20

KISSIMMEE RIVER BASIN

02266295 LATERAL 410 AT S-410, NEAR VINELAND, FL

LOCATION.--Lat 28°21'28", long 81°35'56" in SE¼ sec.27, T.24 S., R.27 E., Orange County, Hydrologic Unit 03090101, at upstream side of control structure 410, 0.5 mi west of sewage treatment plant road, 3.0 mi southwest of EPCOT Center, and 6.2 mi southwest of Vineland.

DRAINAGE AREA.--Indeterminate

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1986 to current year.

GAGE.--Water-stage and gate-opening recorder. Datum of gage is National Geodetic Vertical Datum of 1929. Auxilliary gage at downstream side of control structure 410.

REMARKS.--Estimated daily discharges: Mar. 9 to Sept. 30, leakage through gates. Records fair except those below 3.0 ft^3/s, which are poor. Flow regulated by operation of structure 410. Discharge computed from relation between discharge and gate openings. At high stages interconnection exists between Reedy Creek, Whittenhorse Creek, and Boggy Creek.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 114 ft^3/s, Apr. 1, 1987; maximum gage height, 96.71 ft, Mar. 29, 1987, no flow for many days most years; minimum gage height, 92.73 ft, May 26,27, 1989.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.6	1.7	27	9.7	15	1.6	1.4	.01	.00	.18	.27	1.6
2	5.4	1.7	25	9.1	15	1.6	1.4	.06	.00	.24	.48	1.6
3	8.6	1.4	22	8.3	14	1.3	1.1	.31	.00	.39	.71	1.7
4	15	.87	22	7.9	13	1.4	.80	.24	.00	.47	.76	1.7
5	14	.65	22	7.5	12	1.4	.60	.23	.00	.57	.94	1.7
6	11	.79	22	6.8	11	1.5	.92	.25	.00	.40	1.0	1.8
7	9.6	.94	21	6.7	9.9	1.7	1.1	.28	.00	.45	1.1	2.0
8	8.2	.63	21	6.3	9.1	3.5	.83	.55	.00	.56	1.2	2.0
9	7.2	.39	20	6.0	8.4	1.4	.69	.46	.00	.64	1.4	2.0
10	5.5	.46	19	6.0	7.7	1.4	.62	.31	.00	.66	1.4	2.0
11	4.3	.43	22	5.7	7.3	1.6	.71	.25	.00	.55	1.4	2.1
12	4.2	.37	25	5.5	7.1	1.7	.30	.42	.00	.27	1.5	1.8
13	4.2	.35	24	5.4	6.5	1.8	.11	.36	.00	.20	1.4	1.6
14	4.1	.38	23	5.3	5.9	1.7	.10	.13	.00	.22	1.3	1.6
15	3.9	.57	21	5.1	5.7	1.7	.03	.07	.00	.22	1.5	1.5
16	3.7	.47	21	5.0	5.5	1.6	.04	.14	.00	.14	1.6	1.5
17	3.4	.48	20	5.0	5.4	1.4	.14	.12	.00	.13	1.7	1.3
18	3.1	.36	19	5.0	5.3	1.3	.42	.01	.00	.14	1.7	1.4
19	2.9	.39	19	4.7	5.1	1.6	.53	.02	.30	.14	1.7	1.4
20	2.8	.37	18	4.4	4.7	1.4	.22	.00	.49	.05	1.4	1.4
21	2.6	.32	17	4.4	4.4	1.5	.21	.00	.42	.04	1.3	1.6
22	2.6	.30	17	12	4.5	1.5	.19	.00	.34	.03	1.4	1.7
23	2.6	33	16	19	4.7	1.4	.44	.00	.28	.02	1.5	1.6
24	2.3	33	15	19	2.7	1.3	.59	.00	.23	.01	1.7	1.8
25	2.2	27	14	18	1.8	1.5	.45	.00	.35	.01	1.7	2.0
26	2.2	23	14	18	1.8	1.4	.48	.00	.35	.10	1.6	2.3
27	2.0	22	13	17	1.5	1.2	.36	.00	.28	.15	1.6	2.8
28	1.8	25	12	17	1.3	1.2	.30	.00	.19	.10	1.6	2.9
29	1.8	28	12	17	---	1.3	.22	.00	.05	.26	1.6	5.4
30	1.8	28	11	16	---	1.0	.06	.00	.12	.26	1.7	3.9
31	1.7	---	11	16	---	1.0	---	.00	---	.17	1.6	---
TOTAL	150.3	233.32	585	298.8	196.3	46.9	15.36	4.22	3.40	7.77	41.76	59.7
MEAN	4.85	7.78	18.9	9.64	7.01	1.51	.51	.14	.11	.25	1.35	1.99
MAX	15	33	27	19	15	3.5	1.4	.55	.49	.66	1.7	5.4
MIN	1.7	.30	11	4.4	1.3	1.0	.03	.00	.00	.01	.27	1.3

CAL YR 1988 TOTAL 2965.42 MEAN 8.10 MAX 34 MIN .30
WTR YR 1989 TOTAL 1642.83 MEAN 4.50 MAX 33 MIN .00

SOUTH FLORIDA

KISSIMMEE RIVER BASIN

02266295 LATERAL 410 AT S-410, NEAR VINELAND, FL--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1971, 1974-81, 1988 to current year.

WATER-QUALITY DATA, WATER YEARS OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	SPECIFIC CONDUCTANCE (US/CM) (00095)	PH (STANDARD UNITS) (00400)	TEMPERATURE WATER (DEG C) (00010)	COLOR (PLATINUM-COBALT UNITS) (00080)	OXYGEN, DISSOLVED (MG/L) (00300)	NITROGEN, NITRITE TOTAL (MG/L AS N) (00615)
AUG 1988							
30...	1345	125	5.0	25.0	480	4.9	0.020
APR 1989							
18...	1445	168	6.2	22.5	160	1.8	0.010

DATE	NITROGEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITROGEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITROGEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOSPHOROUS TOTAL (MG/L AS P) (00665)	PHOSPHORUS, ORTHO, TOTAL (MG/L AS P) (70507)
AUG 1988						
30...	0.110	0.130	1.7	1.8	0.100	0.080
APR 1989						
18...	0.180	0.080	1.3	1.4	0.180	0.130

02266300 REEDY CREEK NEAR VINELAND, FL

LOCATION.--Lat 28°19'57", long 81°34'48", in NE¼ sec.11, T.25 S., R.27 E., Osceola County, Hydrologic Unit 03090101, on downstream side of bridge on U.S. Highway 192, about 2.5 mi upstream from bridge on Interstate Highway 4, 6.5 mi southwest of Vineland, and 28 mi upstream from mouth.

DRAINAGE AREA.--75 mi^2, approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Water years 1960, 1962-66 (annual maximum), May 1966 to current year. Results of miscellaneous discharge measurements for some periods prior to May 1966 are unpublished and available in files of the Orlando Subdistrict office.

GAGE.--Water-stage recorder. Datum of gage is 66.37 ft above National Geodetic Vertical Datum of 1929. Sept. 26, 1962, to January 1966, crest-stage gage at site 100 ft upstream at same datum.

REMARKS.--Records good.

AVERAGE DISCHARGE.--23 years, 34.2 ft^3/s, 24,780 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,910 ft^3/s, Sept. 11, 1960, gage height, 14.9 ft, from floodmark; no flow for many days in some years; minimum gage height, 8.18 ft, May 12, 1968.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,710 ft^3/s, Nov. 23, gage height, 13.84 ft; minimum, 6.5 ft^3/s, May 25, gage height, 8.79 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	34	26	221	60	62	27	17	27	11	54	21	18
2	32	21	173	58	53	35	16	22	8.6	49	19	44
3	49	20	135	55	49	36	15	17	8.5	39	17	42
4	104	33	119	53	47	35	15	13	8.9	27	17	30
5	101	37	117	55	45	35	17	13	11	22	16	31
6	65	44	126	53	43	62	16	13	9.6	48	15	35
7	52	65	110	49	41	48	16	13	9.3	64	15	83
8	47	34	132	45	69	34	15	12	9.1	30	15	68
9	42	28	94	43	55	34	14	12	9.7	20	15	49
10	40	26	89	42	35	64	14	12	9.5	18	15	38
11	37	25	97	40	36	35	14	13	8.9	16	14	32
12	35	25	196	37	35	27	14	12	8.9	17	13	25
13	33	27	206	37	35	25	15	12	8.3	18	15	23
14	32	28	153	37	33	24	16	12	9.6	18	17	21
15	30	28	106	36	32	22	25	12	11	18	15	19
16	28	26	95	36	34	23	22	11	11	16	14	19
17	27	26	90	37	31	24	18	11	11	17	14	35
18	27	26	86	36	30	24	19	12	10	17	16	70
19	28	25	128	32	30	24	19	11	10	18	22	50
20	28	24	100	30	30	23	16	11	10	17	29	41
21	26	23	76	45	29	22	15	11	11	18	30	32
22	25	28	73	212	29	22	15	11	14	20	24	28
23	24	998	74	215	29	24	15	11	23	21	20	39
24	24	1010	73	188	32	22	16	8.4	28	19	21	40
25	23	502	72	132	33	21	17	7.0	26	21	25	39
26	23	332	70	91	31	20	17	7.1	18	20	31	61
27	24	284	67	77	29	18	16	7.2	16	20	25	51
28	24	248	66	68	27	18	14	7.3	16	19	23	40
29	24	253	64	66	---	18	12	9.5	19	21	20	35
30	23	243	63	102	---	18	16	15	21	34	15	31
31	25	---	62	98	---	18	---	14	---	24	14	---
TOTAL	1136	4515	3333	2165	1064	882	486	379.5	385.9	780	582	1169
MEAN	36.6	150	108	69.8	38.0	28.5	16.2	12.2	12.9	25.2	18.8	39.0
MAX	104	1010	221	215	69	64	25	27	28	64	31	83
MIN	23	20	62	30	27	18	12	7.0	8.3	16	13	18
AC-FT	2250	8960	6610	4290	2110	1750	964	753	765	1550	1150	2320

CAL YR 1988 TOTAL 23212 MEAN 63.4 MAX 1010 MIN 16 AC-FT 46040
WTR YR 1989 TOTAL 16877.4 MEAN 46.2 MAX 1010 MIN 7.0 AC-FT 33480

02266300 REEDY CREEK NEAR VINELAND, FL--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1961-63, 1965-66, 1968 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: June 1977 to current year.
pH: June 1977 to June 1986 (discontinued).
WATER TEMPERATURE: June 1977 to current year.
DISSOLVED OXYGEN: June 1977 to current year.

INSTRUMENTATION.--Water-quality monitor since June 1977.

REMARKS.--Interruptions of record were due to instrument malfunctions.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE; Maximum daily mean, 531 microsiemens, Aug 11, 1989; minimum daily mean, 50 microsiemens, Nov. 4, 1987.
pH: Maximum daily mean, 7.4 units, Jan. 5, 1980, June 8, 1986; minimum daily mean, 4.9 units July 21, 1978.
WATER TEMPERATURE: Maximum daily mean, 28.8°C, Aug. 6, 1989; minimum daily mean, 6.5°C, Dec. 26, 1983, Jan. 22, 1985.
DISSOLVED OXYGEN: Maximum daily mean, 9.8 mg/L, Mar. 3, 1980; minimum daily mean, 0.1 mg/L, Sept. 5, 1979.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily mean, 531 microsiemens, Aug. 11; minimum daily mean, 89 microsiemens, Nov. 23.
WATER TEMPERATURE: Maximum daily mean, 28.8°C, Aug. 6; minimum daily mean, 9.4°C, Dec. 19.
DISSOLVED OXYGEN: Maximum daily mean, 8.2 mg/L, Feb. 25; minimum daily mean, 1.8 mg/L, July 15.

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1988 TO JANUARY 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	157	---	112	---	140	212	281	286	382	300	480	385
2	161	201	114	---	155	204	276	287	372	317	495	318
3	153	210	120	---	160	197	275	287	380	323	502	300
4	140	188	126	---	164	201	272	267	387	302	492	296
5	131	184	130	189	170	208	267	278	376	290	495	293
6	133	186	129	174	175	182	278	282	376	303	491	290
7	139	174	128	169	178	188	276	300	391	301	511	228
8	148	175	130	167	174	212	279	298	405	341	520	210
9	153	187	128	165	153	222	276	288	395	373	513	225
10	158	192	136	166	186	184	268	289	391	369	529	249
11	168	195	137	166	219	214	271	289	391	377	531	263
12	179	194	136	164	221	238	280	293	399	389	429	270
13	190	201	125	173	221	241	287	305	414	414	422	287
14	197	202	123	176	215	238	296	301	421	425	424	299
15	197	202	125	179	212	239	279	302	475	438	422	311
16	195	198	130	182	204	249	276	303	481	429	420	318
17	192	195	135	184	199	252	289	309	490	438	418	292
18	199	198	137	174	208	255	297	315	482	428	423	247
19	210	201	139	172	227	261	311	323	475	432	387	257
20	217	199	127	175	234	267	273	310	481	448	359	270
21	214	197	133	174	234	271	277	322	479	453	352	284
22	204	194	143	135	227	269	279	332	472	457	352	294
23	208	89	151	118	245	265	269	324	441	437	344	269
24	235	93	156	120	236	271	264	332	396	437	360	270
25	234	105	158	119	218	270	272	353	427	458	361	268
26	231	108	163	119	214	263	310	366	346	448	326	242
27	231	112	166	127	222	262	310	378	358	460	326	247
28	235	112	169	132	212	266	299	382	366	504	336	258
29	232	114	---	---	---	275	276	392	376	490	339	271
30	231	111	---	---	---	276	273	361	363	425	337	280
31	222	---	---	139	---	281	---	367	---	457	360	---
MEAN	190	---	---	---	201	240	281	317	413	402	421	276
MAX	235	---	---	---	245	281	311	392	490	504	531	385
MIN	131	---	---	---	140	182	264	267	346	290	326	210

02266300 REEDY CREEK NEAR VINELAND, FL--Continued

TEMPERATURE, WATER (DEG C), WATER YEAR OCTOBER 1988 TO JANUARY 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24.6	---	18.5	---	18.7	17.4	20.3	22.7	24.7	23.9	25.9	27.1
2	24.6	19.3	15.3	---	19.2	17.9	18.7	23.2	24.8	24.2	26.2	26.3
3	24.5	17.9	14.5	---	19.8	18.9	19.5	22.4	24.6	24.5	26.7	26.6
4	24.2	19.8	14.5	---	19.8	20.2	21.1	23.5	25.0	24.9	26.8	26.2
5	24.4	21.0	14.3	14.6	20.5	21.4	21.3	23.5	25.3	25.3	26.5	26.1
6	23.4	19.8	15.6	16.2	20.5	21.2	20.4	24.0	24.8	25.1	28.8	26.0
7	22.3	18.1	16.6	17.2	20.6	17.8	18.8	23.4	24.0	24.7	28.6	25.9
8	20.5	17.6	17.4	18.2	20.4	15.5	19.2	20.8	24.2	25.4	28.4	26.2
9	20.2	18.0	18.0	18.8	18.1	13.0	20.4	21.0	25.0	25.9	28.1	26.0
10	20.8	18.7	18.2	18.5	15.8	13.0	20.8	21.9	25.6	25.6	27.1	25.7
11	20.1	19.0	17.7	19.9	14.6	14.8	20.1	21.6	25.6	25.9	26.6	25.9
12	19.7	19.8	16.6	20.3	14.8	16.5	18.6	20.7	25.8	25.9	26.4	24.5
13	19.7	20.0	14.5	20.3	15.8	18.3	19.6	20.9	25.8	26.0	25.5	24.3
14	19.5	20.2	12.3	20.0	18.3	19.4	20.4	22.7	26.0	25.8	26.3	24.5
15	19.3	20.1	13.6	20.1	19.2	19.3	20.7	23.6	26.0	26.0	26.6	24.7
16	20.3	20.9	14.4	20.4	19.6	20 8	21.1	23.6	25.9	26.3	26.5	24.7
17	21.0	21.2	12.8	18.2	19.9	21.1	21.8	24.0	26.0	26.1	26.5	24.5
18	21.7	22.0	9.8	17.0	19.3	21.1	21.6	24.6	25.9	26.0	26.9	24.7
19	22.3	21.8	9.4	16.7	18.9	21.2	21.7	23.4	25.1	25.7	26.1	24.3
20	21.9	21.8	11.6	17.2	19.9	22.0	21.5	23.1	24.7	26.0	25.6	24.3
21	22.2	22.0	14.4	16.5	21.0	21.6	20.9	23.7	24.6	26.3	26.2	24.3
22	22.0	21.9	15.6	15.7	20.4	21.1	19.9	23.9	24.4	25.8	26.6	23.8
23	19.9	20.8	16.8	14.4	15.8	20.7	20.0	23.9	24.3	25.8	26.9	23.6
24	19.7	19.9	17.3	14.3	11.3	19.9	20.2	24.5	23.9	26.4	27.1	23.5
25	20.4	18.7	17.3	15.5	10.6	19.3	20.9	25.0	24.1	26.3	27.1	23.7
26	19.6	19.2	17.5	16.2	11.8	20.4	21.6	25.1	24.6	26.5	26.4	23.8
27	20.3	20.2	17.8	16.8	14.0	21.5	22.2	25.6	25.0	26.2	26.8	24.6
28	21.3	20.3	19.0	17.1	15.9	21.6	23.3	25.8	23.2	26.7	27.0	25.0
29	21.5	17.3	---	---	---	21.9	23.7	25.2	24.3	26.6	27.2	24.9
30	21.6	18.2	---	---	---	22.2	23.0	24.5	24.4	25.2	27.0	25.1
31	22.0	---	---	19.7	---	22.4	---	24.6	---	25.9	27.3	---
MEAN	21.5	---	---	---	17.7	19.5	20.8	23.4	25.0	25.7	26.8	25.0
MAX	24.6	---	---	---	21.0	22.4	23.7	25.8	26.0	26.7	28.8	27.1
MIN	19.3	---	---	---	10.6	13.0	18.6	20.7	23.9	23.9	25.5	23.5

02266300 REEDY CREEK NEAR VINELAND, FL--Continued

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1988 TO JANUARY 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.6	---	4.4	---	4.7	6.0	3.3	5.1	---	---	---	---
2	3.7	5.3	5.3	---	4.5	5.3	4.4	5.0	---	---	---	---
3	3.6	5.4	5.8	---	4.4	5.3	4.5	5.3	---	---	---	---
4	3.7	4.3	5.7	---	4.5	5.0	4.1	4.8	---	3.0	---	---
5	3.8	3.8	5.9	4.7	4.3	4.5	3.9	4.9	---	2.9	---	---
6	4.0	3.7	5.4	4.4	4.3	4.9	4.2	4.7	---	2.7	---	---
7	4.1	4.5	5.2	4.1	4.2	5.3	4.8	4.6	---	2.7	---	---
8	4.6	4.8	4.9	3.8	4.5	6.1	5.1	5.1	---	2.7	---	---
9	4.7	4.6	4.7	3.7	5.1	6.7	4.9	5.3	---	2.8	---	---
10	4.6	4.4	4.6	3.7	5.9	7.9	4.7	5.2	---	3.1	---	---
11	4.7	4.3	5.0	---	6.4	6.7	4.9	5.5	---	3.2	---	---
12	4.8	4.1	4.9	---	6.4	5.9	5.5	5.8	---	3.0	---	---
13	4.9	4.1	5.8	---	6.1	5.1	5.4	5.4	---	2.2	---	---
14	5.0	4.1	6.5	3.2	5.4	4.6	5.1	5.0	---	1.9	---	---
15	5.1	4.0	6.3	3.1	5.2	4.7	4.6	4.9	---	1.8	---	---
16	4.9	3.9	5.9	2.9	5.1	3.8	4.7	5.0	---	2.5	---	---
17	4.8	3.8	6.2	3.6	4.9	3.6	4.5	4.7	---	2.3	---	---
18	4.7	3.5	7.3	4.3	4.9	3.5	4.9	4.4	---	2.8	---	---
19	4.5	3.3	7.7	4.4	4.9	3.4	4.8	4.9	---	2.7	---	---
20	4.5	3.2	6.9	4.2	4.8	3.0	4.8	5.3	---	2.5	---	---
21	4.5	3.4	5.7	4.5	4.3	2.9	4.9	4.8	---	1.9	---	---
22	4.5	3.5	5.2	5.4	4.4	2.8	5.3	4.8	---	1.9	---	---
23	5.0	5.7	4.4	4.9	5.8	2.9	5.5	5.1	---	---	---	---
24	5.1	3.8	4.2	5.3	7.7	4.0	5.6	4.7	---	---	---	---
25	5.0	4.2	4.0	5.2	8.2	4.1	5.4	5.1	---	---	---	---
26	5.2	4.3	3.8	5.1	7.9	3.9	5.4	---	---	---	---	---
27	4.9	4.0	3.6	5.0	7.1	3.5	5.1	---	---	---	---	---
28	4.4	3.7	2.9	---	6.5	3.5	4.8	---	---	---	---	---
29	4.2	4.5	---	---	---	3.5	5.0	---	---	---	---	---
30	4.1	4.4	---	---	---	3.1	4.9	---	---	---	---	---
31	4.3	---	---	5.2	---	2.7	---	---	---	---	---	---
MEAN	4.5	---	---	---	5.4	4.5	4.8	---	---	---	---	---
MAX	5.2	---	---	---	8.2	7.9	5.6	---	---	---	---	---
MIN	3.6	---	---	---	4.2	2.7	3.3	---	---	---	---	---

WATER-QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	SPECIFIC CONDUCTANCE (US/CM) (00095)	PH (STANDARD UNITS) (00400)	TEMPERATURE WATER (DEG C) (00010)	COLOR (PLATINUM-COBALT UNITS) (00080)	OXYGEN, DISSOLVED (MG/L) (00300)	CALCIUM DISSOLVED (MG/L AS CA) (00915)	MAGNESIUM, DISSOLVED (MG/L AS MG) (00925)	SODIUM, DISSOLVED (MG/L AS NA) (00930)	POTASSIUM, DISSOLVED (MG/L AS K) (00935)	ALKALINITY LAB (MG/L AS CACO3) (90410)	SULFATE DISSOLVED (MG/L AS SO4) (00945)
MAR 13...	1155	200	6.2	18.0	320	5.0	13	3.9	20	5.6	31	12
APR 18...	1315	300	6.9	21.5	320	5.2	--	--	--	--	--	--
MAY 08...	1000	258	7.1	19.5	320	4.9	16	4.6	26	7.4	41	20
SEP 25...	1120	249	6.5	24.5	280	3.9	16	4.5	24	5.4	43	23

DATE	CHLORIDE, DISSOLVED (MG/L AS CL) (00940)	NITROGEN, NITRITE TOTAL (MG/L AS N) (00615)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITROGEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITROGEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOSPHOROUS TOTAL (MG/L AS P) (00665)	PHOSPHORUS, ORTHO, TOTAL (MG/L AS P) (70507)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	ALUMINUM, TOTAL RECOVERABLE (UG/L AS AL) (01105)	ARSENIC TOTAL (UG/L AS AS) (01002)
MAR 13...	34	0.040	0.650	0.230	1.2	1.4	0.470	0.440	29	300	<1
APR 18...	--	0.020	0.540	0.060	2.0	2.1	0.420	0.340	28	--	--
MAY 08...	39	0.040	0.640	0.160	1.3	1.5	0.410	0.420	27	300	<1
SEP 25...	33	0.010	0.300	0.020	1.1	1.1	0.260	0.230	--	200	1

DATE	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE) (01012)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD) (01027)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR) (01034)	COPPER, TOTAL RECOVERABLE (UG/L AS CU) (01042)	IRON, TOTAL RECOVERABLE (UG/L AS FE) (01045)	LEAD, TOTAL RECOVERABLE (UG/L AS PB) (01051)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN) (01055)	MERCURY TOTAL RECOVERABLE (UG/L AS HG) (71900)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI) (01067)	SELENIUM, TOTAL (UG/L AS SE) (01147)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN) (01092)
MAR 13...	<10	<1	<10	3	420	6	15	--	6	<1	20
MAY 08...	<10	<1	<10	2	390	<5	<10	0.30	4	<1	10
SEP 25...	<10	<1	<10	2	270	3	<10	0.30	1	<1	10

KISSIMMEE RIVER BASIN

02266480 DAVENPORT CREEK NEAR LOUGHMAN, FL

LOCATION.--Lat 28°16'15", long 81°35'28", in NW¼ sec.35, T.25 S., R.27 E. (revised), Osceola County, Hydrologic Unit 03090101, at downstream side of culverts on State Highway 545, 2.0 mi upstream from mouth, and 2.5 mi northwest of Loughman.

DRAINAGE AREA.--23 mi^2, approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--January 1969 to current year.

GAGE.--Water-stage recorder. Datum of gage is 80.49 ft above National Geodetic Vertical Datum of 1929 (Florida Department of Transportation bench mark).

REMARKS.--Records good.

AVERAGE DISCHARGE.--20 years, 10.7 ft^3/s, 6.32 in/yr, 7,750 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 498 ft^3/s, Sept. 22, 1969, gage height, 9.76 ft; minimum, 0.32 ft^3/s, May 19, 1981; minimum gage height, 4.02 ft, May 7,8, 1980.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 80 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 24	0400	*136	*8.07	No other peak greater than base discharge.			

Minimum discharge, 0.95 ft^3/s, June 19,20; minimum gage height, 4.26 ft, Aug. 31.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.6	2.9	33	12	15	5.8	5.0	7.5	1.5	9.7	2.9	2.5
2	6.8	2.8	29	12	14	10	4.1	6.7	1.4	8.6	2.6	11
3	7.8	2.8	26	12	14	12	3.7	5.4	1.3	7.9	2.2	13
4	9.6	5.0	24	11	13	12	3.5	4.2	1.3	5.6	2.1	12
5	9.6	8.8	22	11	12	11	3.5	3.5	3.0	3.9	1.8	15
6	8.3	11	21	10	11	10	3.4	3.0	2.4	4.5	1.6	16
7	7.4	9.1	20	10	10	9.6	3.1	2.6	2.1	11	1.4	17
8	6.7	7.4	18	9.7	9.8	10	3.0	2.4	2.4	13	1.4	13
9	6.0	6.2	17	9.4	9.4	10	2.8	2.2	2.2	9.9	1.8	11
10	5.3	5.4	17	9.2	8.9	9.9	2.7	2.1	1.8	5.9	2.1	8.6
11	5.0	4.9	18	9.0	8.4	9.0	2.6	2.1	1.6	3.7	1.8	6.8
12	4.2	4.5	27	8.8	8.0	8.2	2.7	1.9	1.8	3.4	1.6	5.3
13	4.3	4.3	33	8.6	7.7	7.4	2.6	1.8	1.4	2.8	2.0	4.4
14	4.2	4.2	31	8.4	7.6	6.8	2.6	1.9	1.2	2.5	2.2	3.8
15	4.0	4.1	27	8.1	7.2	6.2	3.9	1.9	1.2	2.2	1.8	3.4
16	3.9	4.0	24	8.2	6.9	5.8	4.6	1.9	1.3	2.0	1.4	4.0
17	3.8	4.0	22	8.3	6.6	5.5	4.0	1.8	1.3	2.4	1.3	4.3
18	3.8	3.9	20	7.9	6.5	5.3	3.5	1.7	1.2	3.4	1.3	6.2
19	3.7	3.8	19	7.7	6.4	4.9	3.1	1.7	1.1	6.3	1.9	14
20	3.6	3.7	18	7.4	6.2	4.7	3.0	1.6	1.0	5.2	2.2	12
21	3.5	3.6	17	10	6.1	4.4	2.8	1.6	1.1	4.2	2.7	9.1
22	3.4	5.3	16	42	6.3	4.1	2.7	1.6	1.6	4.2	2.0	7.0
23	3.3	93	16	68	6.3	3.8	2.5	1.6	e2.8	5.8	1.8	12
24	3.2	133	15	63	6.1	4.6	2.4	1.5	e3.4	5.2	1.5	25
25	3.2	117	15	49	6.0	4.4	2.2	1.5	3.3	4.0	1.4	31
26	3.0	96	13	37	6.0	4.2	2.1	1.5	2.8	3.2	2.3	39
27	3.0	75	14	29	5.8	4.0	2.1	1.4	2.2	2.5	2.0	38
28	2.9	56	14	24	5.7	3.7	2.1	1.4	1.8	2.1	1.7	27
29	2.8	43	13	21	---	3.5	2.2	1.7	1.8	1.8	1.4	20
30	2.8	36	13	19	---	3.5	4.0	2.1	3.0	2.9	1.2	15
31	2.8	---	13	17	---	4.0	---	1.7	---	2.9	1.2	---
TOTAL	149.5	760.7	625	567.7	236.9	208.3	92.5	75.5	56.3	152.7	56.6	406.4
MEAN	4.82	25.4	20.2	18.3	8.46	6.72	3.08	2.44	1.88	4.93	1.83	13.5
MAX	9.6	133	33	68	15	12	5.0	7.5	3.4	13	2.9	39
MIN	2.8	2.8	13	7.4	5.7	3.5	2.1	1.4	1.0	1.8	1.2	2.5
AC-FT	297	1510	1240	1130	470	413	183	150	112	303	112	806
CFSM	.21	1.10	.88	.80	.37	.29	.13	.11	.08	.21	.08	.59
IN.	.24	1.23	1.01	.92	.38	.34	.15	.12	.09	.25	.09	.66

CAL YR 1988 TOTAL 5417.4 MEAN 14.8 MAX 133 MIN 2.0 AC-FT 10750 CFSM .64 IN. 8.76
WTR YR 1989 TOTAL 3388.1 MEAN 9.28 MAX 133 MIN 1.0 AC-FT 6720 CFSM .40 IN. 5.48

e Estimated

02266480 DAVENPORT CREEK NEAR LOUGHMAN, FL--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1965, 1968 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	SPECIFIC CONDUCTANCE (US/CM) (00095)	PH (STANDARD UNITS) (00400)	TEMPERATURE WATER (DEG C) (00010)	COLOR (PLATINUM-COBALT UNITS) (00080)	OXYGEN, DISSOLVED (MG/L) (00300)	CALCIUM DISSOLVED (MG/L AS CA) (00915)	MAGNESIUM, DISSOLVED (MG/L AS MG) (00925)	SODIUM, DISSOLVED (MG/L AS NA) (00930)	POTASSIUM, DISSOLVED (MG/L AS K) (00935)	ALKALINITY LAB (MG/L AS CACO3) (90410)
MAR 13...	1320	109	6.4	17.5	320	7.1	15	4.1	4.2	1.2	23
MAY 08...	1030	152	--	18.5	80	4.8	17	5.1	4.0	2.4	35
SEP 25...	1000	167	6.3	23.5	400	5.1	17	4.2	6.4	1.4	17

DATE	SULFATE DISSOLVED (MG/L AS SO4) (00945)	CHLORIDE, DISSOLVED (MG/L AS CL) (00940)	NITROGEN, NITRITE TOTAL (MG/L AS N) (00615)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITROGEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITROGEN,AMMONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOSPHOROUS TOTAL (MG/L AS P) (00665)	PHOSPHORUS, ORTHO, TOTAL (MG/L AS P) (70507)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	ALUMINUM, TOTAL RECOVERABLE (UG/L AS AL) (01105)	ARSENIC TOTAL (UG/L AS AS) (01002)
MAR 13...	5.5	21	0.010	0.840	<0.010	1.0	0.050	0.030	33	200	<1
MAY 08...	12	13	0.010	2.30	<0.010	0.55	0.050	0.050	11	100	<1
SEP 25...	17	14	0.010	0.090	<0.010	1.6	0.020	0.020	--	300	<1

DATE	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE) (01012)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD) (01027)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR) (01034)	COPPER, TOTAL RECOVERABLE (UG/L AS CU) (01042)	IRON, TOTAL RECOVERABLE (UG/L AS FE) (01045)	LEAD, TOTAL RECOVERABLE (UG/L AS PB) (01051)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN) (01055)	MERCURY TOTAL RECOVERABLE (UG/L AS HG) (71900)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI) (01067)	SELENIUM, TOTAL (UG/L AS SE) (01147)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN) (01092)
MAR 13...	<10	<1	<10	1	260	<5	<10	--	4	<1	20
MAY 08...	<10	<1	<10	1	90	<5	<10	0.50	1	<1	<10
SEP 25...	<10	<1	<10	2	340	1	20	0.30	1	<1	10

KISSIMMEE RIVER BASIN

02266495 REEDY CREEK AT S-40, NEAR LOUGHMAN, FL

LOCATION.--Lat 28°16'32", long 81°32'39" in SE¼ sec.30, T.25 S., R.28 E., Osceola County, Hydrologic Unit 03090101, on right bank 15 ft upstream from spillway, 2.8 mi northeast of Loughman, and 22 mi upstream from mouth.

DRAINAGE AREA.--175 mi^2, approximately.

PERIOD OF RECORD.--October 1986 to current year (gage heights only). Records of gage heights prior to October 1987 are unpublished and available in files of the Orlando Subdistrict office.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (Reedy Creek Improvement District bench mark).

REMARKS.--Flow regulated at station by manipulation of spillway gates.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily gage height, 70.50 ft, Nov. 26, 1988; minimum daily, 66.95 ft, Apr. 10, 1989.

GAGE HEIGHT, IN FEET ABOVE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	68.47	67.69	70.05	68.01	68.62	67.41	67.14	67.88	67.13	67.69	67.87	67.48
2	68.36	67.71	69.92	67.98	68.58	67.57	67.10	67.91	67.10	67.74	67.85	67.77
3	68.36	67.70	69.77	67.95	68.51	67.67	67.06	67.87	67.07	67.78	67.83	67.86
4	68.41	67.87	69.62	67.93	68.43	67.71	67.04	67.80	67.03	67.76	67.86	67.93
5	68.38	68.01	69.48	67.88	68.35	67.72	67.05	67.73	67.09	67.68	67.79	68.03
6	68.36	68.10	69.36	67.85	68.26	67.71	67.04	67.66	67.11	67.79	67.73	68.08
7	68.31	68.12	69.25	67.82	68.17	67.77	67.01	67.60	67.11	67.89	67.66	68.23
8	68.24	68.16	69.15	67.80	68.08	67.85	66.99	67.54	67.14	67.94	67.59	68.27
9	68.14	68.17	69.07	67.77	68.01	67.83	66.97	67.48	67.11	67.92	67.56	68.31
10	68.04	68.14	68.98	67.74	67.95	67.79	66.95	67.42	67.08	67.80	67.55	68.34
11	67.93	68.12	68.93	67.71	67.84	67.80	67.02	67.40	67.05	67.70	67.50	68.33
12	67.83	68.09	68.94	67.69	67.74	67.81	67.25	67.37	67.04	67.67	67.46	68.31
13	67.72	68.08	68.91	67.66	67.65	67.72	67.30	67.34	67.01	67.64	67.48	68.29
14	67.62	68.07	68.89	67.62	67.59	67.60	67.33	67.31	66.99	67.61	67.54	68.26
15	67.55	68.07	68.88	67.59	67.57	67.45	67.55	67.28	66.99	67.58	67.49	68.22
16	67.48	68.07	68.85	67.58	67.55	67.38	67.69	67.27	67.00	67.54	67.43	68.20
17	67.44	68.06	68.77	67.57	67.55	67.33	67.70	67.24	67.01	67.53	67.37	68.22
18	67.39	68.06	68.69	67.56	67.56	67.30	67.66	67.22	67.02	67.60	67.33	68.23
19	67.36	68.06	68.61	67.54	67.54	67.27	67.64	67.21	67.02	67.83	67.43	68.34
20	67.34	68.05	68.54	67.52	67.53	67.25	67.64	67.19	67.00	67.77	67.59	68.27
21	67.31	68.04	68.49	67.62	67.51	67.22	67.60	67.16	67.01	67.71	67.70	68.12
22	67.28	68.07	68.46	68.23	67.51	67.19	67.58	67.15	67.10	67.72	67.69	68.09
23	67.25	69.13	68.41	68.47	67.49	67.27	67.54	67.14	67.18	67.71	67.65	68.26
24	67.27	69.92	68.36	68.67	67.46	67.32	67.52	67.11	67.31	67.70	67.58	68.36
25	67.33	70.36	68.31	68.78	67.45	67.28	67.50	67.07	67.36	67.68	67.55	68.44
26	67.31	70.50	68.26	68.83	67.46	67.23	67.49	67.04	67.34	67.65	67.60	68.54
27	67.30	70.47	68.22	68.84	67.45	67.20	67.48	67.02	67.29	67.60	67.65	68.61
28	67.39	70.39	68.17	68.81	67.42	67.15	67.44	67.00	67.25	67.56	67.65	68.67
29	67.61	70.28	68.13	68.76	---	67.12	67.42	67.01	67.31	67.57	67.62	68.70
30	67.65	70.16	68.10	68.70	---	67.10	67.57	67.11	67.39	67.81	67.55	68.70
31	67.66	---	68.05	68.66	---	67.11	---	67.15	---	67.85	67.48	---
MEAN	67.74	68.59	68.83	68.04	67.82	67.46	67.34	67.34	67.12	67.71	67.60	68.25
MAX	68.47	70.50	70.05	68.84	68.62	67.85	67.70	67.91	67.39	67.94	67.87	68.70
MIN	67.25	67.69	68.05	67.52	67.42	67.10	66.95	67.00	66.99	67.53	67.33	67.48

CAL YR 1988 MEAN 68.49 MAX 70.50 MIN 67.25
WTR YR 1989 MEAN 67.82 MAX 70.50 MIN 66.95

02266496 REEDY CREEK BELOW S-40, NEAR LOUGEMAN, FL

LOCATION.--Lat 28°16'32", long 81°32'39" in SE¼ sec.30, T.25 S., R.28 E., Osceola County, Hydrologic Unit 03090101, on left bank 30 ft downstream from spillway, 2.8 mi northeast of Loughman, and 22 mi upstream from mouth.

DRAINAGE AREA.--175 mi², approximately.

PERIOD OF RECORD.--October 1986 to current year (gage heights only). Records of gage heights prior to October 1987 are unpublished and available in files of the Orlando Subdistrict office.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (Reedy Creek Improvement District bench mark).

REMARKS.--Flow regulated at station by manipulation of spillway gates.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily gage height, 69.72 ft, Apr. 2, 1987; minimum daily, 65.17 ft, July 21, 1989.

GAGE HEIGHT, IN FEET ABOVE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	67.88	65.94	68.67	67.74	67.80	67.21	67.03	65.73	65.29	65.25	65.30	65.30
2	67.83	65.84	68.65	67.72	67.78	67.31	67.00	65.64	65.28	65.19	65.30	65.42
3	67.85	65.78	68.65	67.70	67.77	67.36	66.97	65.53	65.28	65.19	65.31	65.33
4	67.87	66.01	68.56	67.69	67.75	67.38	66.96	65.47	65.27	65.23	65.31	65.33
5	67.85	66.14	68.47	67.67	67.71	67.39	66.96	65.43	65.29	65.25	65.29	65.36
6	67.83	66.25	68.37	67.64	67.69	67.39	66.95	65.41	65.29	65.27	65.28	65.36
7	67.81	66.13	68.30	67.62	67.65	67.42	66.92	65.40	65.30	65.29	65.28	65.38
8	67.79	66.04	68.23	67.61	67.62	67.46	66.91	65.39	65.30	65.31	65.27	65.37
9	67.74	65.97	68.16	67.59	67.59	67.46	66.90	65.38	65.28	65.30	65.27	65.37
10	67.70	65.92	68.12	67.57	67.56	67.45	66.88	65.38	65.28	65.30	65.27	65.38
11	67.64	65.87	68.12	67.55	67.50	67.45	66.71	65.37	65.29	65.31	65.27	65.38
12	67.58	65.82	68.14	67.53	67.45	67.45	66.26	65.37	65.29	65.31	65.26	65.39
13	67.52	65.80	68.11	67.51	67.40	67.41	66.01	65.37	65.28	65.30	65.27	65.39
14	67.46	65.78	68.10	67.49	67.36	67.35	65.82	65.36	65.27	65.30	65.27	65.39
15	67.40	65.76	68.10	67.46	67.34	67.27	66.01	65.36	65.27	65.29	65.26	65.39
16	67.35	65.75	68.09	67.45	67.34	67.21	65.97	65.35	65.28	65.29	65.25	65.40
17	67.32	65.74	68.07	67.45	67.30	67.18	65.79	65.35	65.28	65.30	65.24	65.42
18	67.28	65.73	68.05	67.43	67.27	67.16	65.65	65.35	65.27	65.32	65.24	65.45
19	67.25	65.72	68.01	67.42	67.25	67.14	65.57	65.35	65.27	65.29	65.26	65.48
20	67.24	65.71	67.98	67.40	67.24	67.11	65.53	65.34	65.26	65.19	65.29	66.59
21	67.22	65.69	67.96	67.47	67.24	67.09	65.50	65.34	65.27	65.17	65.29	67.45
22	67.19	65.73	67.95	67.73	67.24	67.07	65.48	65.32	65.28	65.20	65.28	67.18
23	67.17	67.63	67.93	67.74	67.23	67.13	65.46	65.32	65.28	65.22	65.27	66.54
24	67.10	68.35	67.92	67.74	67.22	67.16	65.44	65.31	65.29	65.23	65.27	66.42
25	67.02	68.68	67.90	67.75	67.22	67.13	65.43	65.31	65.28	65.27	65.26	66.31
26	67.00	68.87	67.87	67.79	67.23	67.10	65.42	65.30	65.29	65.28	65.27	66.33
27	66.99	68.94	67.85	67.85	67.22	67.07	65.42	65.29	65.29	65.27	65.27	66.23
28	66.85	68.89	67.83	67.85	67.21	67.04	65.40	65.28	65.28	65.27	65.26	66.12
29	66.45	68.83	67.81	67.83	---	67.01	65.40	65.28	65.29	65.28	65.26	66.01
30	66.22	68.75	67.79	67.82	---	67.00	65.48	65.29	65.29	65.30	65.26	65.93
31	66.06	---	67.76	67.80	---	67.02	---	65.29	---	65.30	65.26	---
MEAN	67.34	66.60	68.11	67.63	67.43	67.24	66.11	65.38	65.28	65.27	65.27	65.78
MAX	67.88	68.94	68.67	67.85	67.80	67.46	67.03	65.73	65.30	65.32	65.31	67.45
MIN	66.06	65.69	67.76	67.40	67.21	67.00	65.40	65.28	65.26	65.17	65.24	65.30

WTR YR 1989 MEAN 66.45 MAX 68.94 MIN 65.17

SOUTH FLORIDA

KISSIMMEE RIVER BASIN

02266500 REEDY CREEK NEAR LOUGHMAN, FL

LOCATION.--Lat 28°15'48", long 81°32'12", in SW¼ sec.32, T.25 S., R.28 E., Osceola County, Hydrologic Unit 03090101, on left bank 20 ft upstream from bridge on U.S. Highways 17 and 92, 1.0 mi downstream from Reedy Creek Improvement District Structure 40. 2.5 mi northeast of Loughman, 3 mi downstream from Davenport Creek, and 21 mi upstream from mouth.

DRAINAGE AREA.--110 mi^2, approximately, includes an indeterminate portion of the Reedy Creek Swamp watershed.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1939 to September 1959, July 1968 to current year.

REVISED RECORDS.--WRD FL 1968: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 64.49 ft above National Geodetic Vertical Datum of 1929. Prior to Aug. 20, 1940, nonrecording gage at same site and datum.

REMARKS.--Records fair. Natural flow of stream affected by several canals, levees, and control structures which divert an undetermined amount of water into Reedy Creek above station or into the Shingle Creek basin. Since May 1970, flow regulated by Reedy Creek Improvement District Structure 40.

AVERAGE DISCHARGE.--41 years (water years 1940-59, 1969-89), 66.2 ft^3/s, 47,960 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 790 ft^3/s, Sept. 24, 1969, gage height, 4.25 ft, from rating curve extended above 400 ft^3/s; no flow for many days in some years; minimum gage height. -0.25 ft, June 1, 1981.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 344 ft^3/s, Nov. 27, gage height, 3.37 ft; no flow for many days; minimum gage height, 0.18 ft, July 3,4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	102	4.3	274	74	95	36	26	2.0	.00	.00	.00	.10
2	97	3.3	256	71	93	40	25	1.5	.00	.00	.00	.28
3	102	2.7	256	69	90	42	23	.80	.00	.00	.00	.00
4	105	5.2	241	67	87	43	23	.37	.00	.00	.00	.00
5	98	7.1	219	65	83	43	24	.15	.00	.00	.00	.00
6	94	9.0	198	63	79	44	23	.02	.00	.00	.00	.00
7	92	6.9	178	61	75	44	22	.00	.00	.00	.00	.00
8	89	5.5	163	60	70	46	21	.00	.00	.00	.00	.00
9	85	4.7	149	58	66	46	20	.00	.00	.00	.00	.00
10	80	4.2	139	57	63	46	20	.00	.00	.00	.00	.00
11	74	3.6	139	55	59	45	17	.00	.00	.00	.00	.00
12	68	3.1	143	54	55	45	8.0	.00	.00	.00	.00	.00
13	62	2.8	135	52	50	44	4.4	.00	.00	.00	.00	.00
14	57	2.6	130	50	47	42	2.7	.00	.00	.00	.00	.00
15	53	2.5	128	48	45	38	4.8	.00	.00	.00	.00	.00
16	49	2.2	126	48	44	35	4.3	.00	.00	.00	.00	.00
17	47	2.2	124	47	43	33	2.6	.00	.00	.00	.00	.00
18	44	2.1	120	46	41	32	1.6	.00	.00	.00	.00	.12
19	42	2.0	115	45	39	31	1.1	.00	.00	.00	.00	.30
20	41	1.9	110	44	39	30	.82	.00	.00	.00	.00	5.1
21	39	1.9	107	49	38	29	.56	.00	.00	.00	.00	20
22	38	2.2	103	80	38	28	.44	.00	.00	.00	.00	25
23	37	81	100	90	37	30	.26	.00	.00	.00	.00	14
24	35	155	97	95	37	32	.12	.00	.00	.00	.00	12
25	31	235	94	99	37	31	.03	.00	.00	.00	.00	9.8
26	29	305	91	102	37	30	.00	.00	.00	.00	.00	10
27	28	342	88	104	37	29	.00	.00	.00	.00	.00	8.4
28	25	336	85	105	36	28	.00	.00	.00	.00	.00	6.5
29	13	318	82	102	---	26	.01	.00	.00	.00	.00	5.1
30	8.4	296	79	100	---	25	.50	.00	.00	.00	.00	4.0
31	5.9	---	77	97	---	26	---	.00	---	.00	.00	---
TOTAL	1770.3	2150.0	4346	2157	1560	1119	276.24	4.84	0.00	0.00	0.00	120.70
MEAN	57.1	71.7	140	69.6	55.7	36.1	9.21	.16	.00	.00	.00	4.02
MAX	105	342	274	105	95	46	26	2.0	.00	.00	.00	25
MIN	5.9	1.9	77	44	36	25	.00	.00	.00	.00	.00	.00
AC-FT	3510	4260	8620	4280	3090	2220	548	9.6	.0	.0	.0	239

CAL YR 1988 TOTAL 28196.20 MEAN 77.0 MAX 342 MIN .50 AC-FT 55930
WTR YR 1989 TOTAL 13504.08 MEAN 37.0 MAX 342 MIN .00 AC-FT 26790

SOUTH FLORIDA

KISSIMMEE RIVER BASIN

02266500 REEDY CREEK NEAR LOUGHMAN, FL--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1960, 1965, 1968 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	SPECIFIC CONDUCTANCE (US/CM) (00095)	PH (STANDARD UNITS) (00400)	TEMPERATURE WATER (DEG C) (00010)	COLOR (PLATINUM-COBALT UNITS) (00080)	OXYGEN, DISSOLVED (MG/L) (00300)	CALCIUM DISSOLVED (MG/L AS CA) (00915)	MAGNESIUM, DISSOLVED (MG/L AS MG) (00925)	SODIUM, DISSOLVED (MG/L AS NA) (00930)	POTASSIUM, DISSOLVED (MG/L AS K) (00935)	ALKALINITY LAB (MG/L AS CACO3) (90410)	SULFATE DISSOLVED (MG/L AS SO4) (00945)
MAR 13...	1240	160	6.4	16.5	280	4.2	14	4.1	13	3.9	27	10
MAY 08...	1100	223	--	20.5	160	1.0	18	4.9	17	5.1	39	25
SEP 25...	1020	335	6.0	24.0	320	1.2	34	8.9	19	3.9	21	78

DATE	CHLORIDE, DISSOLVED (MG/L AS CL) (00940)	NITROGEN, NITRITE TOTAL (MG/L AS N) (00615)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITROGEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITROGEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITROGEN,AMMONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOSPHOROUS TOTAL (MG/L AS P) (00665)	PHOSPHORUS, ORTHO, TOTAL (MG/L AS P) (70507)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	ALUMINUM, TOTAL RECOVERABLE (UG/L AS AL) (01105)	ARSENIC TOTAL (UG/L AS AS) (01002)
MAR 13...	30	0.010	0.510	<0.010	1.0	1.0	0.190	0.180	29	200	<1
MAY 08...	27	0.020	0.260	0.180	0.92	1.1	0.220	0.230	15	100	<1
SEP 25...	27	0.010	0.100	0.330	2.0	2.3	0.130	0.120	--	300	3

DATE	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE) (01012)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD) (01027)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR) (01034)	COPPER, TOTAL RECOVERABLE (UG/L AS CU) (01042)	IRON, TOTAL RECOVERABLE (UG/L AS FE) (01045)	LEAD, TOTAL RECOVERABLE (UG/L AS PB) (01051)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN) (01055)	MERCURY TOTAL RECOVERABLE (UG/L AS HG) (71900)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI) (01067)	SELENIUM, TOTAL (UG/L AS SE) (01147)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN) (01092)
MAR 13...	<10	<1	<10	2	300	<5	<10	--	4	<1	10
MAY 08...	<10	<1	<10	2	270	<5	30	<0.10	1	<1	10
SEP 25...	<10	<30	<10	2	330	1	40	0.40	<1	<1	10

02266550 REEDY CREEK AT STATE HIGHWAY 531 NEAR POINSIANNA, FL

LOCATION.--Lat 28°08'59", long 81°26'28", in SE¼ sec.7, T.27 S., R.29 E., Osceola County, Hydrologic Unit 03090101, at bridge on State Highway 531, 1.6 mi upstream from Lake Russell, and about 9 mi southeast of Poinsianna.

DRAINAGE AREA.--170 mi^2, approximately.

PERIOD OF RECORD.--October 1978 to current year (discharge measurements only).

EXTREMES FOR PERIOD OF RECORD.--Maximum measured, 956 ft^3/s, Apr. 3, 1987; no flow observed at times most years.

DISCHARGE MEASUREMENTS, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND
NOV			APR		
14...	1114	17.2	28...	0950	.98
JAN			JUN		
06...	0930	120	23...	1020	.00
MAR			AUG		
13...	1105	33.1	18...	1000	1.89

KISSIMMEE RIVER BASIN

02267000 CATFISH CREEK NEAR LAKE WALES, FL

LOCATION.--Lat 27°57'40", long 81°29'48", in sec.14, T.29 S., R.28 E., Polk County, Hydrologic Unit 03090101, on left bank, 0.2 mi downstream from Lake Pierce, 7 mi northeast of city of Lake Wales, and 9.3 mi upstream from mouth.

DRAINAGE AREA.--58.9 mi^2.

PERIOD OF RECORD.--October 1947 to current year.

GAGE.--Water-stage recorder. Datum of gage is 72.70 ft above National Geodetic Vertical Datum of 1929 (U.S. Army Corps of Engineers bench mark).

REMARKS.--Estimated daily discharges: Jan. 18 to May 3. Records good except for estimated daily discharges, which are poor.

AVERAGE DISCHARGE.--42 years, 43.1 ft^3/s, 9.94 in/yr, 31,220 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 235 ft^3/s, Sept. 17,18, 1960; maximum gage height, 6.02 ft, Sept. 15, 1960, affected by wind; no flow, June 3-10, 1985; minimum gage height, 2.26 ft, June 8, 1985.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 37 ft^3/s, Oct. 3, gage height, 3.67 ft; minimum, 3.1 ft^3/s, June 19, gage height 2.43 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	33	22	29	24	34	19	16	15	7.5	12	11	9.1
2	33	22	28	24	33	19	16	14	7.1	13	11	9.2
3	34	22	28	24	32	20	17	14	6.8	13	11	8.7
4	36	28	27	24	31	21	17	13	6.5	13	11	8.3
5	36	29	27	23	30	22	18	12	6.4	12	10	8.5
6	35	29	27	22	29	23	18	12	6.2	12	10	8.7
7	34	29	26	22	28	25	18	13	6.1	12	9.8	8.3
8	34	28	26	22	27	26	19	11	6.2	12	9.2	8.2
9	32	28	26	22	26	27	19	11	6.0	12	8.7	7.7
10	32	28	26	22	26	28	19	10	5.7	11	8.6	7.3
11	31	28	26	21	25	28	20	10	5.6	11	10	7.1
12	31	28	29	21	25	29	20	9.5	5.2	11	10	6.6
13	30	28	29	21	24	28	21	9.0	5.0	11	11	6.4
14	29	27	28	21	24	27	21	9.4	4.9	13	11	6.0
15	29	27	27	29	24	27	22	9.6	4.7	12	11	5.7
16	29	26	27	29	23	26	22	9.1	4.2	12	11	5.8
17	28	26	27	24	23	25	23	8.8	4.0	12	10	5.7
18	28	26	26	22	22	24	24	8.5	3.8	11	9.8	5.9
19	28	25	26	22	22	24	24	8.0	3.8	11	11	6.6
20	27	25	25	24	21	23	25	7.7	3.6	11	11	6.3
21	27	25	25	26	21	23	26	7.7	3.6	10	11	6.2
22	26	25	25	27	20	22	26	8.1	4.0	12	11	5.7
23	25	31	25	29	19	22	27	8.4	4.3	12	11	7.0
24	25	31	25	30	18	22	26	7.9	5.7	11	11	8.6
25	24	30	25	32	18	21	24	7.5	6.1	12	11	9.7
26	24	29	25	33	17	20	23	7.2	5.9	12	10	11
27	23	30	24	35	17	20	21	6.9	5.7	11	10	11
28	23	30	24	36	17	19	20	7.0	5.5	11	11	11
29	23	29	25	36	---	18	18	7.4	5.6	12	10	11
30	23	29	25	35	---	18	16	7.3	6.5	12	9.6	11
31	23	---	24	34	---	17	---	7.6	---	11	9.4	---
TOTAL	895	820	812	816	676	713	626	297.6	162.2	363	321.1	238.3
MEAN	28.9	27.3	26.2	26.3	24.1	23.0	20.9	9.60	5.41	11.7	10.4	7.94
MAX	36	31	29	36	34	29	27	15	7.5	13	11	11
MIN	23	22	24	21	17	17	16	6.9	3.6	10	8.6	5.7
AC-FT	1780	1630	1610	1620	1340	1410	1240	590	322	720	637	473
CFSM	.49	.46	.44	.45	.41	.39	.35	.16	.09	.20	.18	.13
IN.	.57	.52	.51	.52	.43	.45	.40	.19	.10	.23	.20	.15

CAL YR 1988 TOTAL 9638.9 MEAN 26.3 MAX 45 MIN 4.6 AC-FT 19120 CFSM .45 IN. 6.09
WTR YR 1989 TOTAL 6740.2 MEAN 18.5 MAX 36 MIN 3.6 AC-FT 13370 CFSM .31 IN. 4.26

KISSIMMEE RIVER BASIN

02268903 KISSIMMEE RIVER AT S-65, NEAR LAKE WALES, FL

LOCATION.--Lat 27°48'14", long 81°11'53", in NW¼ sec.11, T.31 S., R.31 E., Osceola County, Hydrologic Unit 03090101, on right bank at upstream side of lock and control structure 65, 0.1 mi downstream from bridge on State Highway 60, and 25 mi southeast of town of Lake Wales.

DRAINAGE AREA.--1,607 mi^2 at State Highway 60, includes areas drained by Lake Weohyakapka and Lake Marian.

PERIOD OF RECORD.--October 1933 to current year. Prior to October 1969, published as Kissimmee River below Lake Kissimmee.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical datum of 1929 (levels by U.S. Army Corps of Engineers). Prior to Mar. 21, 1934, nonrecording gage at bridge 0.1 mi upstream at datum 1.25 ft lower. Mar. 21, 1934, to Sept. 30, 1950, water-stage recorder 3.2 mi downstream at datum 1.52 ft lower. Mar. 21, 1934, to Sept. 21, 1966, nonrecording gage at bridge 0.1 mi upstream used as supplementary gage. Oct. 1, 1950 to Sept. 30, 1969, water-stage recorder 3.2 mi downstream at datum 43.48 ft higher. Aug. 17, 1962, to Sept. 30, 1969, auxiliary water-stage recorder 5.1 mi downstream and at downstream side of lock and control structure 65 subsequent to Sept. 30, 1969.

REMARKS.--Records good. Flow regulated by operation of control structure 65 since July 1964 and by storage releases at several structures in headwaters. Discharge computed from relation between discharge, head, and gate openings. Gage heights are published as elevations for Lake Kissimmee (station 02268900) in the section of this report entitled "Lake Elevations."

COOPERATION.--Gate-operation record provided by South Florida Water Management District.

AVERAGE DISCHARGE.--56 years, 1,032 ft^3/s, 747,700 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,700 ft^3/s, Feb. 23, 1988; maximum gage height, 13.16 ft, Oct. 9, 1953, from floodmark, site and datum then in use; maximum reverse flow measured, 1,190 ft^3/s, Oct. 17, 1956; no flow for many days in most years; minimum gage height, 42.87 ft, May 25, 1977, present site and datum (result of drawdown of Lake Kissimmee).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,000 ft^3/s, Apr. 19; maximum gage height, 52.89 ft, Jan. 23; no flow for many days; minimum gage height, 48.60 ft, June 19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	1910	1790	643	1100	431	.00	.00	.00
2	.00	.00	.00	.00	1890	1790	634	1120	.00	.00	.00	.00
3	.00	.00	.00	.00	1880	1650	633	1110	.00	.00	.00	.00
4	.00	.00	.00	.00	1890	1980	632	1100	.00	.00	.00	.00
5	.00	.00	.00	.00	1880	1980	640	1100	.00	.00	.00	.00
6	.00	.00	.00	.00	1880	1980	648	1100	.00	.00	.00	.00
7	.00	.00	.00	.00	1880	2010	795	1110	.00	.00	.00	.00
8	.00	.00	.00	.00	818	2420	899	1290	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	2680	869	1410	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	2670	1100	497	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	2600	1970	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	2550	2570	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	1190	1390	2450	788	.00	.00	.00	.00
14	.00	.00	.00	.00	1210	440	2400	1070	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	436	2410	1380	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	368	2410	1890	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	214	2730	2070	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	212	2930	2060	.00	.00	.00	.00
19	.00	.00	.00	.00	1270	213	2920	2040	.00	.00	.00	.00
20	.00	.00	.00	265	1850	213	2890	2030	.00	.00	.00	.00
21	.00	.00	.00	697	1840	213	2910	2010	.00	.00	.00	.00
22	.00	47.5	.00	1530	1850	212	2900	2110	.00	.00	.00	.00
23	.00	29.5	.00	1920	1880	210	2860	2190	.00	.00	.00	.00
24	.00	.00	.00	1910	1860	454	2650	2050	.00	.00	.00	.00
25	.00	.00	.00	1900	1840	651	2480	1960	.00	.00	.00	.00
26	.00	.00	.00	1890	1820	643	2500	1770	.00	.00	.00	.00
27	.00	.00	.00	1900	1800	639	2350	1630	.00	.00	.00	.00
28	.00	.00	.00	1910	1790	637	1570	1620	.00	.00	.00	.00
29	.00	.00	.00	1900	---	635	1110	1600	.00	.00	.00	.00
30	.00	.00	.00	1890	---	637	1120	1220	.00	.00	.00	.00
31	.00	---	.00	1900	---	638	---	940	---	.00	.00	---
TOTAL	0.00	77.00	0.00	19612.00	34228.00	35155	55623	43365.00	431.00	0.00	0.00	0.00
MEAN	.00	2.57	.00	633	1222	1134	1854	1399	14.4	.00	.00	.00
MAX	.00	47	.00	1920	1910	2680	2930	2190	431	.00	.00	.00
MIN	.00	.00	.00	.00	.00	210	632	.00	.00	.00	.00	.00
AC-FT	.0	153	.0	38900	67890	69730	110300	86010	855	.0	.0	.0

CAL YR 1988 TOTAL 377367.00 MEAN 1031 MAX 12100 MIN .00 AC-FT 748500
WTR YR 1989 TOTAL 188491.00 MEAN 516 MAX 2930 MIN .00 AC-FT 373900

KISSIMMEE RIVER BASIN

02268904 KISSIMMEE RIVER BELOW S-65, NEAR LAKE WALES, FL

LOCATION.--Lat 27°48'14", long 81°11'53" in NW¼ sec.11, T.31 S., R.31 E., Osceola County, Hydrologic Unit 03090101, on right bank at downstream side of lock and control structure 65, 0.1 mi downstream from bridge on State Highway 60, and 25 mi southeast of town of Lake Wales.

DRAINAGE AREA.--1,607 mi^2, at State Highway 60, includes areas drained by Lake Weohyakapka and Lake Marian.

PERIOD OF RECORD.--October 1969 to current year.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers). This is the auxiliary gage for station 02268903 located at upstream side of lock and control structure.

REMARKS.--Gage heights partially regulated by operation of structure 65 upstream.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily gage height, 51.44 ft, Oct. 10, 1969; minimum daily, 41.55 ft, Apr. 4, 1977 (result of drawdown of Lake Kissimmee).

GAGE HEIGHT, IN FEET ABOVE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	46.33	46.28	46.33	46.37	46.30	46.35	46.34	46.28	46.21	46.30	46.42	46.33
2	46.36	46.27	46.32	46.37	46.42	46.36	46.34	46.34	46.06	46.25	46.23	46.33
3	46.42	46.27	46.30	46.38	46.47	46.49	46.33	46.36	46.02	46.25	46.30	46.32
4	46.29	46.37	46.28	46.36	46.39	46.49	46.32	46.29	45.99	46.29	46.29	46.30
5	46.34	46.39	46.30	46.36	46.36	46.42	46.25	46.29	45.94	46.32	46.26	46.33
6	46.36	46.39	46.29	46.36	46.35	46.38	46.19	46.32	45.89	46.32	46.29	46.49
7	46.31	46.39	46.29	46.36	46.34	46.33	46.23	46.37	45.88	46.31	46.31	46.60
8	46.33	46.32	46.29	46.36	46.19	46.33	46.15	46.34	46.00	46.26	46.31	46.37
9	46.36	46.34	46.29	46.40	46.03	46.40	46.44	46.27	46.01	46.18	46.32	46.23
10	46.31	46.35	46.29	46.37	46.04	46.34	46.41	46.24	46.06	46.08	46.37	46.25
11	46.32	46.36	46.31	46.31	46.06	46.34	46.26	46.17	46.05	45.96	46.31	46.21
12	46.33	46.38	46.36	46.32	46.11	46.38	46.02	46.12	46.04	45.97	46.29	46.18
13	46.32	46.38	46.27	46.32	46.32	46.37	46.37	46.11	46.03	46.02	46.48	46.28
14	46.31	46.37	46.30	46.34	46.27	46.33	46.44	46.28	46.00	46.04	46.47	46.28
15	46.33	46.36	46.31	46.30	46.30	46.38	46.43	46.39	45.96	46.11	46.36	46.28
16	46.31	46.38	46.32	46.33	46.31	46.16	46.41	46.42	45.93	46.32	46.31	46.27
17	46.34	46.35	46.31	46.32	46.31	46.27	46.44	46.41	45.89	46.64	46.26	46.24
18	46.34	46.34	46.31	46.32	46.33	46.36	46.47	46.36	45.86	46.55	46.37	46.27
19	46.34	46.34	46.32	46.32	46.47	46.28	46.46	46.36	45.93	46.39	46.29	46.39
20	46.33	46.34	46.33	46.34	46.43	46.26	46.49	46.36	45.99	46.79	46.34	46.28
21	46.33	46.34	46.33	46.41	46.39	46.27	46.43	46.35	46.11	46.92	46.37	46.29
22	46.34	46.37	46.34	46.52	46.45	46.31	46.41	46.42	46.16	46.43	46.27	46.34
23	46.34	46.43	46.35	46.36	46.38	46.37	46.40	46.39	46.30	46.36	46.34	46.39
24	46.34	46.31	46.37	46.37	46.35	46.35	46.35	46.39	46.42	46.26	46.38	46.44
25	46.32	46.32	46.38	46.37	46.33	46.22	46.42	46.36	46.52	46.39	46.39	46.47
26	46.31	46.34	46.39	46.39	46.33	46.30	46.30	46.35	46.52	46.19	46.33	46.46
27	46.30	46.35	46.39	46.34	46.35	46.33	46.28	46.38	46.34	46.13	46.54	46.51
28	46.30	46.35	46.39	46.34	46.40	46.35	46.25	46.33	46.33	46.23	46.50	46.46
29	46.28	46.34	46.32	46.33	---	46.36	46.33	46.36	46.37	46.31	46.35	46.35
30	46.28	46.33	46.34	46.39	---	46.30	46.19	46.24	46.34	46.40	46.47	46.41
31	46.29	---	46.36	46.39	---	46.33	---	46.31	---	46.44	46.37	---
MEAN	46.33	46.35	46.33	46.36	46.31	46.34	46.34	46.32	46.10	46.30	46.35	46.34
MAX	46.42	46.43	46.39	46.52	46.47	46.49	46.49	46.42	46.52	46.92	46.54	46.60
MIN	46.28	46.27	46.27	46.30	46.03	46.16	46.02	46.11	45.86	45.96	46.23	46.18

CAL YR 1988 MEAN 46.44 MAX 48.54 MIN 45.84
WTR YR 1989 MEAN 46.31 MAX 46.92 MIN 45.86

02270500 ARBUCKLE CREEK NEAR DE SOTO CITY, FL

LOCATION.--Lat 27°26'32", long 81°17'51", in SE¼ sec.11, T.35 S., R.30 E., Highlands County, Hydrologic Unit 03090101, on right bank 20 ft downstream from bridge on U.S. Highway 98, 1.3 mi upstream from mouth, and 7 mi east of De Soto City.

DRAINAGE AREA.--379 mi^2, excludes area drained by Lake Weohyakapka and includes area drained by Lake Sebring.

PERIOD OF RECORD.--June 1939 to current year.

GAGE.--Water-stage recorder. Datum of gage is 35.51 ft above National Geodetic Vertical Datum of 1929. Since June 7, 1967 auxiliary water-stage recorder at site 1.3 mi upstream. See WDR FL-82-2 for history of changes prior to June 7, 1967.

REMARKS.--Records poor. Records include small diversions into Lake Arbuckle from Lake Weohyakapka through Blue Jordan Swamp.

AVERAGE DISCHARGE.--50 years, 315 ft^3/s, 228,200 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,380 ft^3/s, Sept. 23, 1948, gage height, 8.71 ft, from rating curve extended above 5,300 ft^3/s; no flow Nov. 23,30, Dec. 28, 1986; minimum gage height, 0.14 ft, May 11, 1962, estimated, result of channel work upstream.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 646 ft^3/s, Sept. 4, gage height, 4.64 ft; minimum, 4.5 ft^3/s, Apr. 29; minimum gage height, 1.66 ft, June 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	352	118	115	82	164	26	29	61	7.8	75	50	385
2	320	118	103	73	161	22	34	63	7.3	112	53	400
3	319	118	102	77	136	104	35	70	7.0	107	69	575
4	308	160	99	66	116	102	36	75	6.7	98	71	637
5	296	180	92	68	106	97	47	75	6.6	106	84	588
6	300	180	96	69	96	90	44	36	6.3	95	67	530
7	285	175	96	68	90	102	45	17	6.7	84	66	499
8	270	161	91	67	84	108	45	45	6.9	64	63	436
9	260	161	99	66	74	124	45	90	6.4	48	78	360
10	260	161	94	63	66	122	47	105	6.1	40	126	320
11	250	161	99	62	63	112	44	140	6.4	34	90	307
12	250	161	107	64	58	104	44	130	7.2	31	93	267
13	220	160	109	63	56	103	47	120	9.2	31	208	245
14	202	150	118	63	53	95	53	130	12	30	234	216
15	202	143	115	62	49	87	55	140	13	29	210	203
16	202	139	128	58	45	88	52	110	11	30	194	182
17	180	132	104	52	43	70	56	66	12	31	182	166
18	180	125	98	54	39	61	49	54	13	32	182	159
19	180	114	98	58	38	56	49	38	12	75	177	192
20	170	107	98	54	38	54	62	27	11	127	203	172
21	170	102	96	52	44	54	63	20	8.4	115	220	168
22	160	147	96	177	47	53	64	19	9.2	104	252	193
23	150	116	95	257	37	56	68	18	11	93	262	241
24	150	113	91	255	31	51	72	19	12	89	247	283
25	140	119	91	245	27	33	67	18	14	80	245	306
26	140	120	87	241	28	38	63	16	16	73	244	350
27	128	119	90	258	33	42	53	15	20	65	262	465
28	128	125	86	237	25	47	53	12	20	75	269	581
29	128	116	83	229	---	39	51	10	22	64	284	559
30	128	112	81	213	---	41	63	8.8	33	54	291	525
31	128	---	81	190	---	32	---	8.3	---	50	408	---
TOTAL	6556	4113	3038	3643	1847	2213	1535	1756.1	340.2	2141	5484	10510
MEAN	211	137	98.0	118	66.0	71.4	51.2	56.6	11.3	69.1	177	350
MAX	352	180	128	258	164	124	72	140	33	127	408	637
MIN	128	102	81	52	25	22	29	8.3	6.1	29	50	159

CAL YR 1988 TOTAL 92925 MEAN 254 MAX 827 MIN 17
WTR YR 1989 TOTAL 43176.3 MEAN 118 MAX 637 MIN 6.1

KISSIMMEE RIVER BASIN

02273000 KISSIMMEE RIVER AT S-65E, NEAR OKEECHOBEE, FL
(National stream-quality accounting network station)

LOCATION.--Lat 27°13'32", long 80°57'46", in NE¼ sec.30, T.37 S., R.34 E., Okeechobee County, Hydrologic Unit 03090101, at upstream side of lock and control structure 65E, 1.8 mi downstream from State Highway 70, 8.2 mi upstream from mouth, and 8.5 mi west of Okeechobee.

DRAINAGE AREA.--Indeterminate.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1928 to September 1962, October 1962 to September 1964 (elevations only), October 1964 to current year. Prior to October 1964, published as Kissimmee River near Okeechobee. Monthly discharges only for some periods, published in WSP 1304.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers). Prior to Apr. 28, 1949, nonrecording gage, and Apr. 28, 1949, to Sept. 30, 1964, water-stage recorder, 1.8 mi upstream at datum 1.37 ft lower. Auxiliary gage at downstream side of lock and control structure 65E.

REMARKS.--Records good. Flow regulated by operation of structure 65E beginning in October 1964. Discharge computed from relation between discharge, head, and gate openings. Records do not include diversions from Lake Istokpoga through control structure 68 on Canal 41A, which began July 1962.

COOPERATION.--Gate-opening record provided by South Florida Water Management District.

AVERAGE DISCHARGE.--34 years (water years 1929-62), 2,188 ft^3/s, 1,585,000 acre-ft/yr; 25 years (water years 1965-89), 1,309 ft^3/s, 948,400 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 27,900 ft^3/s, Oct. 3, 1969; maximum gage height, 27.00 ft, present datum, Oct. 14, 1953; no flow for many days in most years since 1965; minimum gage height observed, 12.33 ft, present datum, June 3, 1962.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in August 1928, resulting from hurricane, reached a stage of 28.9 ft, present datum, discharge, 20,000 ft^3/s, from rating curve extended above 14,000 ft^3/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,600 ft^3/s, Apr. 11; maximum gage height, 21.77 ft, Jan. 27; no flow for many days; minimum gage height, 19.71 ft, Dec. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	1540	1500	554	844	462	101	17	314
2	94	.00	.00	.00	1560	1410	547	785	.00	81	109	534
3	145	.00	.00	.00	1680	1970	368	756	.00	259	115	741
4	192	.00	.00	.00	1610	1950	444	1030	.00	299	78	671
5	56	.00	.00	.00	1670	1820	412	877	.00	48	51	426
6	38	.00	.00	.00	1570	1600	509	743	.00	203	18	424
7	38	.00	.00	.00	1460	2010	415	868	.00	141	.00	960
8	38	.00	.00	.00	993	2140	514	746	.00	50	51	1070
9	38	.00	.00	.00	195	2270	558	1100	.00	50	15	636
10	38	.00	.00	.00	83	2190	630	506	.00	50	.00	496
11	86	29	.00	.00	124	2260	1450	235	.00	50	36	419
12	70	11	.00	.00	120	2400	1630	16	.00	23	31	389
13	39	.00	.00	.00	100	1680	1970	74	.00	.00	250	267
14	39	.00	.00	.00	823	912	2200	675	.00	175	739	176
15	39	.00	.00	.00	193	702	2050	1380	.00	60	457	120
16	39	.00	.00	.00	74	395	2070	1360	.00	196	301	120
17	39	.00	.00	.00	.00	248	1770	1410	.00	303	240	148
18	64	28	.00	.00	.00	166	2680	1770	.00	302	115	214
19	77	14	.00	.00	361	108	2280	1690	.00	416	207	447
20	49	58	.00	.00	1350	176	2500	1590	.00	138	402	297
21	39	34	.00	.00	1730	219	2780	1380	.00	173	321	276
22	39	.00	.00	1320	1590	133	2330	1880	.00	253	120	188
23	39	.00	.00	1640	1630	132	2320	1860	.00	280	442	315
24	39	.00	.00	1430	1440	267	2710	1720	.00	156	229	348
25	39	.00	.00	1900	1370	720	2190	1720	.00	116	199	332
26	30	.00	.00	1640	1690	393	2020	1460	.00	146	311	344
27	.00	.00	.00	1760	1480	446	2120	1390	.00	36	380	619
28	.00	.00	.00	1880	1440	446	1530	1080	.00	.00	404	912
29	.00	.00	.00	1610	---	449	983	1260	.00	.00	601	1210
30	.00	.00	.00	1590	---	451	1200	1290	.00	.00	383	725
31	.00	---	.00	1660	---	376	---	831	---	.00	.00	---
TOTAL	1443.00	174.00	0.00	16430.00	27876.00	316[illegible]9	45734	34326	462.00	4105.00	6622.00	14138
MEAN	46.5	5.80	.00	530	996	1030	1524	1107	15.4	132	214	471
MAX	192	58	.00	1900	1730	2400	2780	1880	462	416	739	1210
MIN	.00	.00	.00	.00	.00	108	368	16	.00	.00	.00	120
AC-FT	2860	345	.0	32590	55290	63350	90710	68090	916	8140	13130	28040

CAL YR 1988 TOTAL 432417.00 MEAN 1181 MAX 8070 MIN .00 AC-FT 857700
WTR YR 1989 TOTAL 183249.00 MEAN 502 MAX 2780 MIN .00 AC-FT 363500

02273000 KISSIMMEE RIVER AT S-65E, NEAR OKEECHOBEE, FL--Continued
(National stream-quality accounting network station)

GAGE HEIGHT, IN FEET ABOVE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21.14	20.66	20.71	20.18	21.11	21.13	21.19	21.08	21.15	21.16	21.05	21.36
2	21.20	20.61	20.64	20.22	21.20	21.13	21.12	21.10	21.04	21.11	21.05	21.14
3	21.17	20.57	20.57	20.23	21.06	21.05	21.14	21.18	21.00	21.16	21.13	21.00
4	21.08	20.80	20.50	20.25	21.23	21.12	21.14	21.21	20.96	21.08	21.10	21.06
5	21.06	20.87	20.44	20.29	21.00	21.00	21.19	21.19	20.95	21.02	21.18	21.00
6	21.06	20.84	20.44	20.31	21.12	21.18	21.24	21.20	21.01	21.17	21.07	21.08
7	21.08	20.83	20.44	20.41	21.04	21.17	21.22	21.16	21.07	21.06	21.07	21.06
8	21.09	20.89	20.44	20.50	21.09	21.04	21.30	21.15	21.06	21.09	21.13	21.03
9	21.11	20.97	20.45	20.54	21.24	21.00	21.10	21.13	21.07	21.09	21.04	21.02
10	21.19	21.04	20.44	20.54	21.19	21.01	21.14	21.12	21.08	21.15	21.11	21.01
11	21.16	21.07	20.40	20.53	21.23	21.21	21.21	21.22	21.01	21.14	21.12	21.12
12	21.04	21.05	20.49	20.52	21.11	20.94	21.12	21.08	21.00	21.10	20.99	21.11
13	21.03	21.08	20.50	20.52	21.12	21.12	21.16	21.07	21.00	21.09	21.07	21.05
14	21.04	21.10	20.48	20.50	21.19	21.18	21.13	21.06	20.98	21.17	21.24	21.08
15	21.06	21.09	20.47	20.51	21.17	21.05	21.05	20.96	20.98	21.02	21.04	21.10
16	21.10	21.04	20.49	20.49	20.86	21.20	20.97	20.92	20.95	21.04	21.11	21.09
17	21.12	21.04	20.48	20.48	20.92	21.27	21.21	21.04	20.94	21.16	21.14	21.05
18	21.14	21.15	20.46	20.46	20.95	21.26	21.09	21.07	20.92	21.05	21.04	21.10
19	21.08	21.16	20.44	20.44	21.03	21.23	20.99	20.96	20.93	21.11	21.03	21.08
20	21.06	21.15	20.44	20.40	20.96	21.22	21.15	20.93	20.94	21.10	21.19	21.05
21	21.07	21.05	20.43	20.37	20.92	21.20	21.10	21.24	20.93	21.05	21.06	21.01
22	21.04	21.00	20.44	20.70	21.00	21.16	21.06	21.19	20.89	21.00	21.21	21.10
23	21.03	21.00	20.44	20.79	20.99	21.12	21.24	21.04	20.87	21.12	21.13	21.10
24	21.01	20.97	20.46	21.05	20.99	21.23	21.05	21.17	20.87	21.10	21.05	20.97
25	21.01	20.88	20.43	21.09	21.14	21.08	21.01	21.09	20.86	21.16	21.10	21.08
26	20.99	20.85	20.43	21.06	21.10	21.02	20.96	21.03	20.85	21.12	21.13	20.98
27	20.95	20.81	20.38	21.18	20.99	21.06	21.07	21.15	20.88	21.05	21.03	21.00
28	20.88	20.79	20.32	21.06	21.19	21.05	21.03	21.07	20.97	21.05	21.06	21.02
29	20.82	20.74	20.22	20.96	---	21.17	21.07	21.14	21.09	21.03	21.10	20.97
30	20.74	20.68	20.19	21.14	---	21.21	21.12	21.19	21.15	21.01	20.96	21.02
31	20.70	---	20.18	21.06	---	21.18	---	21.08	---	21.04	21.08	---
MEAN	21.04	20.93	20.44	20.61	21.08	21.13	21.12	21.10	20.98	21.09	21.09	21.06
MAX	21.20	21.16	20.71	21.18	21.24	21.27	21.30	21.24	21.15	21.17	21.24	21.36
MIN	20.70	20.57	20.18	20.18	20.86	20.94	20.96	20.92	20.85	21.00	20.96	20.97

CAL YR 1988 MEAN 21.01 MAX 21.67 MIN 20.18
WTR YR 1989 MEAN 20.97 MAX 21.36 MIN 20.18

02273000 KISSIMMEE RIVER AT S-65E, NEAR OKEECHOBEE, FL--Continued
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1940, 1960-62, 1967 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	GAGE HEIGHT (FEET) (00065)	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	OXYGEN, DIS-SOLVED (MG/L) (00300)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)
DEC 07...	1000	20.44	0.0	205	7.1	20.5	5.9	--	--	62
MAR 14...	1425	21.08	1040	157	6.6	20.0	9.4	E5	E19	47
APR 10...	1402	20.20	825	174	7.4	24.0	6.7	E6	E3	50
MAY 30...	1300	21.24	1310	166	7.2	29.0	5.2	E10	E2	50
SEP 06...	0806	21.09	148	206	7.1	29.0	0.9	200	E8	63

DATE	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)
DEC 07...	17	4.8	18	2.3	36	20	29	0.10	4.5	161
MAR 14...	13	3.6	12	2.3	31	17	19	0.10	0.79	114
APR 10...	14	3.7	12	2.5	33	11	21	0.10	0.92	122
MAY 30...	14	3.7	12	1.9	37	12	18	0.10	0.88	110
SEP 06...	18	4.3	15	2.6	67	12	25	0.10	4.3	138

DATE	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS-PHOROUS TOTAL (MG/L AS P) (00665)	PHOS-PHOROUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHOROUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)	SEDI-MENT, SUS-PENDED (MG/L) (80154)
DEC 07...	0.010	0.370	<0.010	0.020	0.90	0.080	0.060	0.040	100	3
MAR 14...	0.010	<0.100	0.030	0.030	0.90	0.020	0.010	0.010	50	2
APR 10...	<0.010	<0.100	0.020	0.030	1.2	0.050	0.030	0.010	57	7
MAY 30...	<0.010	<0.100	0.030	0.020	0.70	0.030	0.010	<0.010	1	100
SEP 06...	<0.010	<0.100	0.180	0.180	1.3	0.130	0.110	0.080	--	--

02273000 KISSIMMEE RIVER AT S-65E, NEAR OKEECHOBEE, FL--Continued
(National stream-quality accounting network station)

WATER-QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	ALUMINUM, DIS-SOLVED (UG/L AS AL) (01106)	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)	BARIUM, DIS-SOLVED (UG/L AS BA) (01005)	BERYLLIUM, DIS-SOLVED (UG/L AS BE) (01010)	CADMIUM DIS-SOLVED (UG/L AS CD) (01025)	CHROMIUM, DIS-SOLVED (UG/L AS CR) (01030)	COBALT, DIS-SOLVED (UG/L AS CO) (01035)	COPPER, DIS-SOLVED (UG/L AS CU) (01040)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)	LITHIUM DIS-SOLVED (UG/L AS LI) (01130)
MAR 14...	20	<1	13	<0.5	<1	<1	<3	<1	<5	<4
MAY 30...	20	<1	13	<0.5	2	<1	<3	6	18	<4
SEP 06...	30	<1	17	<0.5	2	1	<3	8	8	<4

DATE	MANGANESE, DIS-SOLVED (UG/L AS MN) (01056)	MERCURY DIS-SOLVED (UG/L AS HG) (71890)	MOLYBDENUM, DIS-SOLVED (UG/L AS MO) (01060)	NICKEL, DIS-SOLVED (UG/L AS NI) (01065)	SELENIUM, DIS-SOLVED (UG/L AS SE) (01145)	SILVER, DIS-SOLVED (UG/L AS AG) (01075)	STRONTIUM, DIS-SOLVED (UG/L AS SR) (01080)	VANADIUM, DIS-SOLVED (UG/L AS V) (01085)	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)
MAR 14...	1	0.4	<10	6	<1	<1.0	150	<6	5
MAY 30...	5	0.3	<10	7	<1	<1.0	110	<6	13
SEP 06...	25	<0.1	10	1	<1	<1.0	300	<6	16

KISSIMMEE RIVER BASIN

02273001 KISSIMMEE RIVER BELOW S-65E, NEAR OKEECHOBEE, FL

LOCATION.--Lat 27°13'32", long 80°57'46", in NE¼ sec.30, T.37 S., R.34 E., Okeechobee County, Hydrologic Unit 03090101, at downstream side of lock and control structure 65E, 1.8 mi downstream from State Highway 70, 8.2 mi upstream from mouth, and 8.5 mi west of Okeechobee.

DRAINAGE AREA.--Indeterminate.

PERIOD OF RECORD.--October 1964 to current year.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers). This is the auxiliary gage for station 02273000 at upstream side of lock and control structure.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily gage height, 18.18 ft, Feb. 28, 1983; minimum daily, 9.72 ft, July 28, 1981.

GAGE HEIGHT, IN FEET ABOVE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15.62	14.79	14.44	14.23	13.92	13.23	12.79	12.93	11.88	11.17	11.04	11.23
2	15.65	14.70	14.21	14.23	13.89	13.24	12.94	12.75	11.83	11.19	11.05	11.33
3	15.71	14.82	14.40	14.21	13.92	13.37	13.00	12.76	11.84	11.24	11.03	11.32
4	15.58	15.01	14.48	14.03	13.85	13.39	13.04	12.79	11.79	11.25	10.95	11.40
5	15.51	15.16	14.43	14.12	13.92	13.46	12.92	12.76	11.76	11.31	10.96	11.42
6	15.34	15.00	14.50	14.15	13.89	13.47	12.80	12.73	11.72	11.31	11.01	11.44
7	15.29	14.98	14.53	14.12	13.87	13.25	12.83	12.42	11.73	11.32	11.12	11.46
8	15.28	14.98	14.50	14.10	13.84	12.98	12.85	12.44	11.85	11.28	11.02	11.45
9	15.40	14.96	14.48	14.10	13.45	12.94	12.88	12.61	11.71	11.23	11.01	11.50
10	15.35	14.99	14.45	14.08	13.44	12.91	12.85	12.53	11.62	11.23	10.96	11.49
11	15.40	14.94	14.49	14.05	13.55	13.18	12.63	12.38	11.57	11.18	10.97	11.48
12	15.32	14.93	14.41	14.07	13.51	13.37	12.54	12.28	11.56	11.15	10.90	11.45
13	15.15	14.90	14.20	14.02	13.64	13.46	12.62	12.34	11.53	11.14	10.95	11.47
14	15.13	14.83	14.39	14.09	13.63	13.45	12.65	12.32	11.53	11.10	11.01	11.51
15	15.15	14.84	14.43	14.03	13.60	13.43	12.76	12.41	11.61	11.13	11.11	11.53
16	15.15	14.90	14.40	14.02	13.56	13.41	12.70	12.40	11.58	11.08	11.12	11.52
17	15.09	14.87	14.17	13.91	13.52	13.41	12.75	12.41	11.36	11.11	11.24	11.45
18	15.15	14.86	14.07	13.88	13.39	13.38	12.77	12.34	11.25	11.06	11.17	11.38
19	15.19	14.85	14.30	13.91	13.36	13.33	12.77	12.32	11.23	11.09	11.14	11.47
20	15.14	14.75	14.34	13.90	13.49	13.38	12.85	12.29	11.23	11.17	11.24	11.44
21	15.12	14.81	14.34	13.79	13.54	13.37	12.73	12.23	11.22	11.18	11.23	11.33
22	15.08	15.11	14.33	13.79	13.36	13.38	12.70	12.31	11.23	11.22	11.26	11.63
23	15.07	15.15	14.32	13.71	12.97	13.44	12.84	12.29	11.16	11.16	11.27	11.60
24	15.09	14.55	14.33	13.84	12.93	13.22	12.87	12.23	11.15	11.11	11.29	11.64
25	14.98	14.74	14.31	13.89	13.02	13.10	12.87	12.14	11.18	11.07	11.32	11.97
26	15.01	14.83	14.28	13.97	13.17	13.24	12.79	12.17	11.15	11.04	11.27	12.02
27	15.02	14.84	14.34	13.94	13.23	13.21	12.72	12.11	11.15	11.11	11.29	12.01
28	14.94	14.62	14.34	13.94	13.22	13.19	12.72	12.06	11.15	11.13	11.28	12.01
29	14.90	14.51	14.29	13.92	---	13.20	12.72	11.99	11.13	11.06	11.21	12.06
30	14.82	14.71	14.28	13.95	---	13.20	12.92	11.99	11.11	11.11	11.27	12.08
31	14.85	---	14.30	13.95	---	13.11	---	11.93	---	11.08	11.29	---
MEAN	15.21	14.86	14.36	14.00	13.52	13.28	12.79	12.38	11.48	11.16	11.13	11.57
MAX	15.71	15.16	14.53	14.23	13.92	13.47	13.04	12.93	11.88	11.32	11.32	12.08
MIN	14.82	14.51	14.07	13.71	12.93	12.91	12.54	11.93	11.11	11.04	10.90	11.23

CAL YR 1988 MEAN 15.39 MAX 16.18 MIN 14.07
WTR YR 1989 MEAN 12.98 MAX 15.71 MIN 10.90

02273200 CANAL 41A AT S-68 AT LAKE ISTOKPOGA, NEAR LAKE PLACID, FL

LOCATION.--Lat 27°19'55", long 81°15'05", in sec.19 or 20, T.36 S., R.31 E., Highlands County, Hydrologic Unit 03090101, 33 ft from right bank, 350 ft upstream from control structure 68 at Lake Istokpoga, and 7.5 mi northeast of town of Lake Placid.

DRAINAGE AREA.--Indeterminate.

PERIOD OF RECORD.--December 1963 to September 1989 (discontinued). Prior to October 1968, published as "above S--68."

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (U.S. Army Corps of Engineers bench mark). Prior to Nov. 28, 1973, at same site at datum 30.00 ft higher.

REMARKS.--Records good. Flow completely regulated by operation of control structure 68. Records do not include diversions through stoplog control structure on Istokpoga Canal. Gage heights are published as elevations for Lake Istokpoga (station 02271700) in the section of this report entitled "LAKE ELEVATIONS."

COOPERATION.--Gate-operation record provided by South Florida Water Management District.

AVERAGE DISCHARGE.--25 years (water years 1965-89), 248 ft^3/s, 179,700 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,500 ft^3/s, Sept. 6, 1965; maximum gage height, 40.23 ft, present datum, Dec. 10, 1969, Sept. 3, 1979, affected by wind; no flow for many days each year; minimum gage height, 35.82 ft, present datum, June 17, 1971, affected by wind.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 720 ft^3/s, May 3; maximum gage height, 39.50 ft, Oct. 3, affected by wind; no flow for many days; minimum gage height, 37.03 ft, June 20, affected by wind.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	180	206	.00	60	150	60	450	234	30	.00	.00
2	.00	180	270	.00	60	150	60	627	58	30	.00	.00
3	95	180	270	.00	60	150	60	720	90	11	.00	.00
4	344	64	270	59	60	150	60	543	90	.00	.00	.00
5	450	.00	155	90	60	150	60	333	90	.00	.00	.00
6	450	.00	90	90	60	150	60	270	90	.00	.00	.00
7	450	.00	31	90	60	150	60	270	90	.00	.00	.00
8	450	.00	.00	90	60	150	60	270	90	.00	.00	.00
9	450	.00	.00	90	60	150	60	153	90	.00	.00	.00
10	161	.00	.00	90	60	150	60	90	90	.00	.00	.00
11	.00	.00	.00	90	60	150	60	90	90	.00	.00	.00
12	.00	.00	.00	31	60	150	60	108	71	.00	.00	.00
13	.00	.00	.00	.00	60	150	60	120	80	.00	.00	.00
14	.00	58	.00	.00	60	150	80	120	90	.00	.00	.00
15	.00	90	.00	.00	60	150	90	82	90	.00	.00	.00
16	.00	90	59	.00	60	111	90	95	90	.00	.00	.00
17	98	90	90	.00	60	90	90	296	90	.00	.00	.00
18	150	90	90	59	60	90	90	450	90	.00	.00	.00
19	111	90	35	90	60	90	90	450	90	.00	.00	.00
20	90	90	.00	90	60	90	90	450	90	.00	.00	.00
21	90	90	.00	90	60	90	148	450	90	.00	.00	.00
22	90	90	.00	90	60	90	180	220	90	.00	.00	.00
23	90	90	60	90	78	90	180	209	71	.00	.00	.00
24	109	90	90	31	129	90	180	270	60	.00	.00	.00
25	120	90	90	.00	150	90	180	387	60	.00	.00	.00
26	120	90	90	.00	150	90	356	333	21	.00	.00	.00
27	156	90	32	.00	150	90	450	270	.00	.00	.00	.00
28	180	90	.00	.00	150	90	450	270	.00	.00	.00	.00
29	180	90	.00	.00	---	90	450	270	.00	.00	.00	.00
30	180	90	.00	38	---	71	450	500	20	.00	.00	.00
31	180	---	.00	60	---	60	---	210	---	.00	.00	---
TOTAL	4794.00	2102.00	1928.00	1358.00	2127	3662	4424	9376	2295.00	71.00	0.00	0.00
MEAN	155	70.1	62.2	43.8	76.0	118	147	302	76.5	2.29	.00	.00
MAX	450	180	270	90	150	150	450	720	234	30	.00	.00
MIN	.00	.00	.00	.00	60	60	60	82	.00	.00	.00	.00
AC-FT	9510	4170	3820	2690	4220	7260	8780	18600	4550	141	.0	.0

CAL YR 1988 TOTAL 109640.00 MEAN 300 MAX 2250 MIN .00 AC-FT 217500
WTR YR 1989 TOTAL 32137.00 MEAN 88.0 MAX 720 MIN .00 AC-FT 63740

SOUTH FLORIDA

KISSIMMEE RIVER BASIN

02273300 CANAL 41A AT S-84, NEAR OKEECHOBEE, FL

LOCATION.--Lat 27°12'55", long 80°58'55", in SW¼ sec.36, T.37 S., R.33 E., Highlands County, Hydrologic Unit 03090101, 40 ft from left bank, 500 ft upstream from control structure 84, and 9.5 mi west of Okeechobee.

DRAINAGE AREA.--Indeterminate.

PERIOD OF RECORD.--November 1963 to September 1989 (discontinued). Prior to October 1968, published as "above S-84."

GAGE.--Water-stage and deflection-meter recorder. Datum of gage is 10.00 ft above National Geodetic Vertical Datum of 1929 (U.S. Army Corps of Engineers bench mark).

REMARKS.--Records fair except those for estimated daily discharges and those below 50 ft^3/s, which are poor. Flow regulated by operation of structure 84, by storage releases upstream at structure 68 at outlet of Lake Istokpoga and several small diversions above station for irrigation. Flow may be diverted into either Indian Prairie Canal or Harney Pond Canal by combined operation of structures 70, 75, 82, and 83.

COOPERATION.--Gate-operation record provided by South Florida Water Management District.

AVERAGE DISCHARGE.--25 years (water years 1965-89), 181 ft^3/s, 131,100 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 4,080 ft^3/s, Oct. 3, 1969; maximum gage height, 17.39 ft, July 9, 1984; no flow for many days each year; minimum gage height recorded, 6.37 ft, Nov. 24, 1988, but may have been lower during period of no gage-height record Nov. 24-30, 1988.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge 994 ft^3/s, Nov. 23; maximum gage height, 15.59 ft, Apr. 20; no flow for many days; minimum gage height recorded, 6.37 ft, Nov. 24, but may have been lower during period of no gage-height record Nov. 24-30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	279	288	.00	294	.00
2	.00	.00	.00	.00	.00	.00	.00	467	.00	.00	.00	106
3	.00	.00	e170	.00	.00	109	.00	449	.00	.00	.00	90
4	.00	.00	e260	.00	.00	.00	.00	306	.00	.00	.00	41
5	416	.00	e120	.00	.00	9.0	.00	.00	.00	.00	.00	92
6	658	.00	.00	.00	.00	278	.00	231	.00	.00	.00	108
7	378	.00	.00	.00	.00	.00	.00	160	.00	.00	.00	116
8	471	.00	.00	.00	.00	180	.00	139	.00	.45	.00	80
9	667	.00	.00	.00	.00	.00	.00	.00	.00	1.9	.00	78
10	192	.00	.00	.00	.00	209	.00	.00	.00	2.8	.00	93
11	.00	.00	.00	.00	.00	.00	.00	.00	.00	3.8	.00	.00
12	.00	.00	.00	.00	.00	198	.00	.00	.00	4.7	.21	.00
13	.00	.00	.00	.00	.00	.00	.00	.00	.00	4.7	222	101
14	.00	.00	.00	.00	.00	.00	.00	127	.00	5.2	146	.00
15	.00	.00	.00	.00	.00	228	.00	.00	.00	273	206	.90
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	123	.00	93
17	.00	.00	.00	.00	.00	.00	.30	154	.00	.00	.70	.00
18	.00	.00	.00	.00	.00	.00	96	304	.00	.00	138	.00
19	.00	.00	.00	.00	.00	.00	50	.00	.00	.00	.00	117
20	.00	.00	.00	.00	.00	.00	96	193	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	.00	151	296	.00	.00	174	85
22	.00	.00	.00	.00	.00	.00	159	.00	.00	.00	.00	.00
23	.00	994	.00	.00	.00	.00	.00	307	.00	.00	.00	.00
24	.00	229	.00	123	.00	.00	178	.00	.00	.00	.00	.70
25	.00	.00	.00	.00	.00	.00	141	344	.00	.00	.00	108
26	.00	.00	102	.00	.00	.00	162	.00	.00	.00	.07	.00
27	.00	.00	32	.00	.00	.00	310	342	.00	.00	.22	143
28	.00	.00	.00	.00	.00	.00	197	.00	.00	.00	186	.00
29	.00	.00	.00	.00	---	.00	352	282	.00	.00	.00	.00
30	.00	.00	.00	.00	---	.00	244	230	.00	.12	.00	97
31	.00	---	.00	.00	---	.00	---	190	---	.10	.00	---
TOTAL	2782.00	1223.00	684.00	123.00	0.00	1211.00	2136.30	4800.00	288.00	419.77	1367.20	1549.60
MEAN	89.7	40.8	22.1	3.97	.00	39.1	71.2	155	9.60	13.5	44.1	51.7
MAX	667	994	260	123	.00	278	352	467	288	273	294	143
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	5520	2430	1360	244	.0	2400	4240	9520	571	833	2710	3070

CAL YR 1988 TOTAL 71247.00 MEAN 195 MAX 1570 MIN .00 AC-FT 141300
WTR YR 1989 TOTAL 16583.87 MEAN 45.4 MAX 994 MIN .00 AC-FT 32890

e Estimated

02273300 CANAL 41A AT S-84, NEAR OKEECHOBEE, FL--Continued

GAGE HEIGHT, IN FEET ABOVE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13.34	14.21	10.47	13.96	14.86	14.49	14.64	14.64	13.94	13.69	14.66	14.58
2	13.37	14.04	12.08	14.01	14.75	14.65	14.59	14.58	13.60	13.93	13.68	14.93
3	13.45	13.85	---	14.04	14.66	14.66	14.66	14.62	13.62	14.20	13.82	14.78
4	13.84	14.20	---	13.91	14.64	14.94	14.52	14.57	13.63	14.45	14.12	14.67
5	14.35	14.55	---	13.83	14.66	15.17	14.52	14.62	13.62	14.66	14.12	14.86
6	14.62	14.80	---	14.02	14.67	14.81	14.54	14.56	13.63	14.82	14.23	14.74
7	14.62	14.80	14.30	13.95	14.57	14.58	14.48	14.49	13.67	14.83	14.46	14.86
8	14.59	14.74	14.23	14.07	14.45	14.55	14.41	14.48	13.65	15.00	14.49	14.77
9	14.65	14.66	14.17	14.31	14.35	14.80	14.38	14.60	13.66	15.04	14.53	14.90
10	14.44	14.61	14.19	14.54	14.25	14.58	14.40	14.63	13.68	15.06	14.56	14.73
11	14.18	14.54	14.25	14.59	14.18	14.57	14.38	14.63	13.70	15.08	14.58	14.66
12	14.18	14.46	14.38	14.70	14.09	14.78	14.35	14.63	13.70	15.10	14.67	14.86
13	14.18	14.38	14.44	14.60	13.97	14.89	14.31	14.60	13.70	15.10	14.76	15.00
14	14.15	14.30	14.46	14.47	14.08	14.91	14.28	14.61	13.66	15.11	14.56	14.62
15	14.14	14.22	14.51	14.39	14.17	14.72	14.37	14.15	13.65	15.05	14.82	14.84
16	14.03	14.15	14.54	14.32	14.13	14.28	14.40	14.31	13.63	13.59	14.56	14.74
17	14.13	14.14	14.57	14.23	14.07	14.38	14.57	14.45	13.60	13.78	14.97	14.66
18	14.12	14.22	14.71	14.13	14.03	14.46	14.49	14.47	13.58	14.08	14.47	14.81
19	14.08	14.14	14.84	14.00	13.96	14.50	14.66	14.48	13.55	14.16	14.67	14.78
20	13.91	14.08	14.69	13.89	13.90	14.52	14.76	14.42	13.38	14.29	14.95	14.75
21	13.80	14.07	14.69	13.90	13.86	14.64	14.67	14.24	13.25	14.50	14.88	14.69
22	13.79	14.38	14.50	14.38	13.92	14.85	14.68	14.64	13.11	14.64	14.33	14.54
23	13.66	12.70	14.54	14.75	13.98	14.84	14.52	14.47	13.00	14.89	14.40	14.79
24	13.53	---	14.57	14.48	13.90	14.76	14.57	14.34	13.02	14.85	14.47	14.98
25	13.46	---	14.79	14.52	14.13	14.70	14.54	14.26	13.07	14.87	14.58	14.60
26	13.37	---	14.91	14.60	14.30	14.71	14.65	14.40	13.10	14.90	14.93	14.77
27	13.37	---	14.39	14.68	14.34	14.86	14.57	14.30	13.14	14.92	14.98	14.66
28	13.61	---	14.25	14.73	14.49	14.81	14.70	14.01	13.23	14.94	14.81	14.64
29	13.86	---	14.12	14.76	---	14.76	14.64	14.53	13.38	14.96	14.28	14.85
30	14.18	---	14.02	14.80	---	14.71	14.68	14.20	13.49	14.97	14.38	14.97
31	14.36	---	13.95	14.83	---	14.70	---	14.33	---	14.98	14.47	---
MEAN	13.98	---	---	14.34	14.26	14.70	14.53	14.46	13.49	14.66	14.52	14.77
MAX	14.65	---	---	14.83	14.86	15.17	14.76	14.64	13.94	15.11	14.98	15.00
MIN	13.34	---	---	13.83	13.86	14.28	14.28	14.01	13.00	13.59	13.68	14.54

TAYLOR CREEK BASIN AND INFLOW TO LAKE OKEECHOBEE FROM NORTH

02274000 TAYLOR CREEK NEAR BASINGER, FL

LOCATION.--Lat 27°23'39", long 80°53'44", in SE¼ sec.26, T.35 S., R.34 E., Okeechobee County, Hydrologic Unit 03090102, near center of channel on downstream side of bridge on State Highway 68, 800 ft upstream from control structure 3, 0.8 mi downstream from small tributary, 8.5 mi east of Basinger, and 17 mi upstream from mouth.

DRAINAGE AREA.--15.7 mi^2.

PERIOD OF RECORD.--June 1955 to September 1989 (discontinued).

GAGE.--Water-stage recorder. Datum of gage is 25.00 ft above National Geodetic Vertical Datum of 1929. Prior to Apr. 13, 1960 at present site, at datum 4.10 ft higher. Apr. 14, 1960, to Sept. 30, 1962, at site about 500 ft downstream, and Oct. 1, 1962, to Sept. 30, 1966, at present site, at datum 4.10 ft higher.

REMARKS.--Records fair. Some diversion during low flow for irrigation. Flow regulated at station by operation of control structure 3 since February 1965.

AVERAGE DISCHARGE.--34 years, 13.9 ft^3/s, 10,070 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,540 ft^3/s, Oct. 15, 1956, gage height, 11.98 ft, present datum, from rating curve extended above 1,100 ft^3/s; no flow at times in most years; minimum gage height recorded, 2.62 ft, Oct. 6-10, 1987 (corrected).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 191 ft^3/s, Aug. 14, gage height, 6.31 ft; no flow for many days; minimum gage height, 2.69 ft, part or all of each day Nov. 17-30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.66	.30	.84	.30	.48	.24	.00	.24	.24	6.2	.84	3.5
2	.66	.30	.84	.30	.48	.28	.00	.24	.24	2.7	.90	46
3	.66	.30	.60	.24	.36	3.2	.00	.24	.24	1.1	.78	19
4	.66	3.3	.54	.24	.24	4.0	.00	.24	.24	.78	.54	20
5	.66	1.9	.48	.24	.24	1.9	.03	.24	.24	.54	.36	28
6	.60	.84	.48	.24	.24	1.1	.66	.24	.24	.42	.24	44
7	.54	.54	.42	.24	.24	1.3	.56	.24	.24	.36	.24	91
8	.54	.42	.42	.24	.24	4.0	.34	.24	.24	.36	.24	35
9	.54	.30	.42	.24	.24	4.5	5.6	.24	.24	.24	.24	21
10	.54	.24	.36	.24	.24	3.0	.54	.24	.24	.24	.24	19
11	.54	.24	.42	.24	.24	1.6	.36	.24	.24	.24	.24	15
12	.54	.24	.66	.24	.24	1.3	.30	.24	.24	.42	.36	12
13	.54	.24	.72	.24	.24	.90	.30	.24	.24	.54	8.5	9.9
14	.42	.24	.60	.24	.24	.84	.30	.27	.24	.36	105	7.7
15	.42	.24	.54	.24	.24	.78	.36	.32	.24	.30	14	5.8
16	.42	.24	.48	.24	.24	1.3	.42	.24	.24	.24	5.8	5.1
17	.42	.24	.42	.24	.24	3.4	.42	.24	.24	.24	4.0	3.7
18	.48	.18	.42	.24	.24	4.0	.36	.24	.24	.24	2.1	3.7
19	.48	.18	.36	.24	.24	2.7	.36	.24	.24	.24	4.5	3.7
20	.48	.18	.36	.24	.24	1.3	.60	.24	.24	.24	17	3.5
21	.48	.18	.36	.24	.24	1.1	.78	.24	.24	.24	10	2.5
22	.48	.18	.54	1.3	.24	.90	.60	.36	.24	.24	6.6	1.6
23	.42	.18	.48	2.7	.24	.78	.36	1.3	.24	.24	17	1.4
24	.42	.18	.42	1.1	.24	.78	.27	.54	.24	.24	11	1.6
25	.42	.18	.36	.90	.24	.68	.24	.32	.30	.24	100	3.5
26	.42	.18	.36	.78	.24	.00	.24	.24	.27	.24	42	12
27	.42	.18	.36	.66	.24	.00	.24	.24	.24	.24	38	14
28	.36	.18	.30	.54	.24	.00	.24	.24	.24	.24	38	11
29	.30	.18	.30	.54	---	.00	.24	.24	.24	.32	15	7.9
30	.30	.24	.30	.54	---	.00	.24	.24	1.3	.42	8.5	5.8
31	.30	---	.30	.48	---	.00	---	.24	---	.30	5.2	---
TOTAL	15.12	12.52	14.46	14.70	7.32	45.88	14.96	9.11	8.35	18.96	457.42	457.9
MEAN	.49	.42	.47	.47	.26	1.48	.50	.29	.28	.61	14.8	15.3
MAX	.66	3.3	.84	2.7	.48	4.5	5.6	1.3	1.3	6.2	105	91
MIN	.30	.18	.30	.24	.24	.00	.00	.24	.24	.24	.24	1.4
AC-FT	30	25	29	29	15	91	30	18	17	38	907	908

CAL YR 1988 TOTAL 2688.82 MEAN 7.35 MAX 166 MIN .00 AC-FT 5330
WTR YR 1989 TOTAL 1076.70 MEAN 2.95 MAX 105 MIN .00 AC-FT 2140

02274000 TAYLOR CREEK NEAR BASINGER, FL--Continued

GAGE HEIGHT, IN FEET ABOVE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.72	2.70	2.80	2.71	3.35	3.09	5.22	3.32	3.18	3.65	3.40	3.51
2	2.72	2.70	2.80	2.71	3.35	3.18	5.43	3.32	3.13	3.51	3.41	4.43
3	2.72	2.70	2.76	2.70	3.34	3.53	5.50	3.31	3.07	3.44	3.39	3.96
4	2.72	2.97	2.75	2.70	3.32	3.56	5.54	3.31	3.00	3.39	3.36	3.98
5	2.72	2.91	2.74	2.75	3.31	3.48	5.62	3.30	2.93	3.36	3.34	4.14
6	2.71	2.80	2.74	2.84	3.31	3.44	5.93	3.29	2.90	3.35	3.32	4.39
7	2.71	2.75	2.73	2.87	3.31	3.45	5.91	3.28	2.96	3.34	3.30	5.14
8	2.71	2.73	2.73	2.93	3.31	3.56	5.85	3.21	3.07	3.34	3.28	4.27
9	2.71	2.71	2.73	3.03	3.31	3.58	5.14	3.14	3.13	3.32	3.28	4.02
10	2.71	2.70	2.72	3.13	3.31	3.52	3.36	3.08	3.30	3.31	3.28	3.97
11	2.71	2.70	2.73	3.20	3.31	3.47	3.34	3.04	3.27	3.32	3.28	3.88
12	2.71	2.70	2.77	3.27	3.29	3.45	3.33	2.99	3.21	3.35	3.30	3.79
13	2.71	2.70	2.78	3.28	3.25	3.41	3.33	2.95	3.11	3.36	3.74	3.72
14	2.70	2.70	2.76	3.28	3.21	3.40	3.33	3.03	3.02	3.34	5.35	3.65
15	2.70	2.70	2.75	3.28	3.18	3.39	3.34	3.33	2.93	3.33	3.94	3.59
16	2.70	2.70	2.74	3.28	3.14	3.45	3.35	3.28	2.85	3.32	3.64	3.56
17	2.70	2.70	2.73	3.28	3.10	3.54	3.35	3.22	2.86	3.31	3.54	3.52
18	2.71	2.69	2.73	3.28	3.05	3.56	3.34	3.18	2.94	3.30	3.49	3.52
19	2.71	2.69	2.72	3.29	3.00	3.51	3.34	3.14	2.91	3.30	3.58	3.52
20	2.71	2.69	2.72	3.29	2.95	3.45	3.37	3.07	2.87	3.31	4.03	3.51
21	2.71	2.69	2.72	3.29	2.92	3.43	3.39	3.00	2.79	3.31	3.80	3.48
22	2.71	2.69	2.75	3.45	2.93	3.41	3.37	3.05	2.74	3.31	3.87	3.45
23	2.71	2.69	2.74	3.51	2.98	3.39	3.34	3.45	2.95	3.31	4.03	3.44
24	2.71	2.69	2.73	3.44	2.96	3.39	3.33	3.36	3.30	3.30	3.84	3.45
25	2.71	2.69	2.72	3.41	2.98	3.39	3.32	3.33	3.33	3.29	5.24	3.51
26	2.71	2.69	2.72	3.39	3.02	3.73	3.32	3.31	3.32	3.29	4.37	3.80
27	2.71	2.69	2.72	3.38	3.06	4.26	3.31	3.31	3.31	3.29	4.32	3.83
28	2.70	2.69	2.71	3.36	3.08	4.65	3.31	3.31	3.30	3.28	4.31	3.75
29	2.70	2.69	2.71	3.36	---	4.86	3.31	3.30	3.31	3.31	3.88	3.66
30	2.70	2.70	2.71	3.36	---	4.97	3.32	3.28	3.39	3.35	3.68	3.59
31	2.70	---	2.71	3.35	---	5.07	---	3.24	---	3.33	3.57	---
MEAN	2.71	2.72	2.74	3.17	3.17	3.66	4.01	3.22	3.08	3.34	3.74	3.80
MAX	2.72	2.97	2.80	3.51	3.35	5.07	5.93	3.45	3.39	3.65	5.35	5.14
MIN	2.70	2.69	2.71	2.70	2.92	3.09	3.31	2.95	2.74	3.28	3.28	3.44

WTR YR 1989 MEAN 3.28 MAX 5.93 MIN 2.69

TAYLOR CREEK BASIN AND INFLOW TO LAKE OKEECHOBEE FROM NORTH

02274330 TAYLOR CREEK ABOVE S-1, NEAR OKEECHOBEE, FL

LOCATION.--Lat 27°17'47", long 80°49'44", in NE¼ sec.33, T.36 S., R.35 E., Okeechobee County, Hydrologic Unit 03090102, near left bank on upstream side of wingwall of abandoned control structure 1,800 ft upstream from U.S. Highway 441, 0.3 mi upstream from Williamson Ditch, 3.7 mi north of Okeechobee, and 9.7 mi upstream from mouth at control structure 191.

DRAINAGE AREA.--62.2 mi^2.

PERIOD OF RECORD.--March 1964 to September 1989 (gage heights only, discontinued).

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (Florida Department of Transportation bench mark). Prior to June 25, 1964, reference point at present site and June 25, 1964 to May 31, 1976 at site 150 ft upstream at same datum.

REMARKS.--Flow regulated by control structure 191 beginning July 1973.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 24.69 ft, June 23, 1973, result of coffer dam; minimum, 12.87 ft, estimated, Sept. 7, 1965.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 21.79 ft, Sept. 6; minimum, 18.00 ft, July 18.

GAGE HEIGHT, IN FEET ABOVE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19.06	---	---	19.42	19.15	19.14	19.20	19.23	---	---	19.23	19.25
2	19.17	---	---	19.40	19.37	19.15	19.22	19.38	---	---	19.39	19.37
3	19.35	---	---	19.00	19.38	19.34	19.22	---	---	---	19.25	19.32
4	19.12	---	---	19.02	19.39	19.09	19.23	---	---	---	19.31	19.34
5	19.26	---	---	19.06	19.40	19.23	19.24	---	---	---	19.22	19.82
6	19.15	---	---	19.09	19.40	19.32	19.24	---	---	---	19.15	20.43
7	19.33	---	---	19.12	19.40	19.18	19.22	---	---	19.13	19.19	19.38
8	19.14	---	---	19.15	19.39	19.07	19.36	---	---	19.33	19.19	19.29
9	19.16	---	---	19.17	19.17	19.26	19.41	---	---	19.44	19.26	19.29
10	19.28	---	---	19.20	18.96	19.00	19.44	---	---	19.38	19.24	19.30
11	19.39	---	---	19.22	19.01	19.15	19.34	---	---	19.21	19.23	19.27
12	19.16	---	19.35	19.25	19.04	19.27	18.96	---	---	19.01	19.37	19.33
13	19.08	---	19.01	19.27	19.07	19.36	18.99	---	---	18.90	19.25	19.23
14	19.16	---	19.08	19.29	19.09	19.42	19.02	---	---	18.79	19.29	19.30
15	19.23	---	19.16	19.30	19.11	19.06	19.16	---	---	18.64	19.24	19.26
16	19.31	---	19.22	19.31	19.11	19.13	19.30	---	---	18.43	19.27	19.26
17	19.37	---	19.25	19.31	19.12	19.25	19.25	---	---	18.21	19.27	19.24
18	19.18	---	19.28	19.32	19.12	19.21	19.17	---	---	18.07	19.23	19.28
19	19.10	---	19.32	19.32	19.12	19.18	19.31	---	---	18.25	19.30	19.25
20	19.18	---	19.36	19.33	19.14	19.19	19.23	---	---	18.46	19.35	19.30
21	19.24	---	19.40	19.34	19.15	19.28	19.22	---	---	18.66	19.32	19.19
22	19.29	---	19.13	19.15	19.15	19.38	19.32	---	---	18.99	19.31	19.29
23	19.34	---	19.07	19.21	19.12	19.41	19.16	---	---	19.24	19.29	19.31
24	19.37	---	19.12	19.34	19.10	19.04	19.21	---	---	19.41	19.29	19.20
25	19.40	---	19.17	19.20	19.10	19.09	19.30	---	---	19.14	19.30	19.36
26	19.43	---	19.21	19.08	19.11	19.15	19.34	---	---	19.27	19.28	19.35
27	19.22	---	19.26	19.15	19.13	19.19	19.37	---	---	19.40	19.30	19.30
28	19.04	---	19.31	19.21	19.13	19.21	19.37	---	---	19.22	19.25	19.28
29	19.08	---	19.34	19.26	---	19.21	19.38	---	---	19.10	19.26	19.30
30	19.14	---	19.37	19.30	---	19.22	19.41	---	---	19.24	19.27	19.26
31	19.18	---	19.39	19.32	---	19.20	---	---	---	19.20	19.30	---
MEAN	19.22	---	---	19.23	19.18	19.21	19.25	---	---	---	19.27	19.34
MAX	19.43	---	---	19.42	19.40	19.42	19.44	---	---	---	19.39	20.43
MIN	19.04	---	---	19.00	18.96	19.00	18.96	---	---	---	19.15	19.19

TAYLOR CREEK BASIN AND INFLOW TO LAKE OKEECHOBEE FROM NORTH

02274495 WILLIAMSON DITCH AT S-7, NEAR OKEECHOBEE, FL

LOCATION.--Lat 27°17'45", long 80°49'35", in NW¼ sec.34, T.36 S., R.35 E., Okeechobee County, Hydrologic Unit 03090102, near right bank 125 ft upstream from control structure 7, 450 ft upstream from mouth, and 3.6 mi north of Okeechobee.

DRAINAGE AREA.--35.4 mi^2.

PERIOD OF RECORD.--March 1964 to September 1989 (discontinued). Prior to October 1968, published as "above S-7."

GAGE.--Water-stage recorder and sharp-crested weir. Datum of gage is National Geodetic Vertical Datum of 1929 (Florida Department of Transportation bench mark). Prior to June 23, 1964, nonrecording gage at site 125 ft downstream at same datum.

REMARKS.--Records good above 30 ft^3/s and poor below. Flow regulated at times by stoplog control 1 mi upstream.

AVERAGE DISCHARGE.--25 years (water years 1965-89), 28.7 ft^3/s, 11.01 in/yr, 20,790 acre-ft/yr.

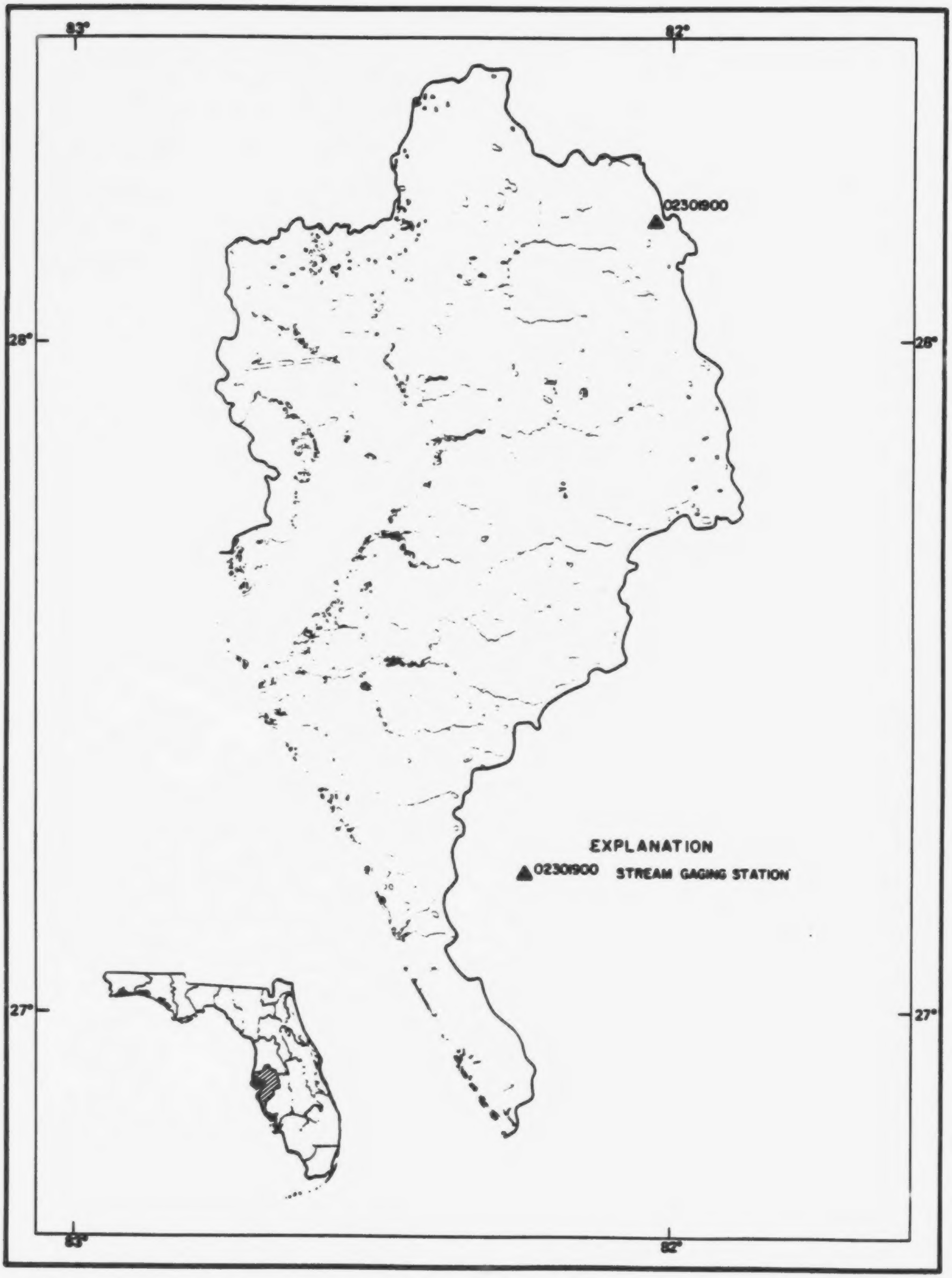
EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,100 ft^3/s, Aug. 28, 1964, gage height, 23.12 ft; maximum gage height, 23.62 ft, July 18, 1974, backwater from Taylor Creek; no flow for several days in 1981, 1985, 1986, 1987, 1988, 1989; minimum gage height after completion of weir in April 1964, 19.24 ft, June 2, 1985.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 248 ft^3/s, Sept. 6; maximum gage height, 21.84 ft, Sept. 6, affected by backwater; no flow for many days; minimum gage height, 19.21 ft, June 27.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.4	.74	.74	1.4	1.2	.54	.35	2.7	.00	79	8.2	39
2	1.2	.10	.54	1.6	1.2	.54	.17	2.7	.00	44	9.1	156
3	1.8	.05	.54	.54	1.4	2.4	.35	1.8	.00	11	9.5	93
4	2.1	2.7	.54	.54	1.4	7.4	.17	1.2	.00	1.6	8.2	106
5	2.1	6.5	.74	.54	1.6	6.1	.42	.74	.00	13	4.6	186
6	1.4	5.8	1.2	.35	1.6	2.1	30	.35	.00	74	3.0	190
7	1.6	3.6	.94	.35	1.6	.94	19	.07	.00	36	1.8	113
8	1.8	3.0	.54	.54	1.6	1.2	6.9	.02	.00	16	1.6	72
9	1.2	1.8	.54	.54	2.7	9.9	4.3	.00	.02	11	9.3	48
10	1.4	1.8	.54	.54	2.1	5.4	3.3	.00	.00	6.5	34	31
11	2.4	1.2	.54	.54	1.8	2.1	2.4	.00	.00	3.9	13	18
12	1.8	.74	1.4	.54	1.4	1.4	.74	.00	.00	3.3	17	14
13	1.2	.74	.94	.74	1.2	1.4	.54	.00	.00	3.9	38	28
14	1.2	.94	.74	.54	.84	2.4	.49	.04	.00	3.9	45	17
15	1.4	1.4	.35	.54	.74	1.2	24	.17	.00	4.3	33	9.5
16	2.1	.54	.35	.54	.54	.94	17	.01	.00	3.3	23	7.7
17	2.4	.54	.35	.54	.54	28	29	.00	.00	2.7	17	8.2
18	2.7	.54	.35	.54	.54	60	18	.00	.00	2.7	11	21
19	2.1	.74	.06	.54	.54	15	10	.00	.00	2.7	56	37
20	2.1	.94	.74	.54	.54	6.2	21	.00	.00	3.0	149	23
21	1.8	1.2	1.2	.74	.54	1.4	26	.00	.00	3.6	144	12
22	1.8	7.6	.74	1.2	.74	2.7	13	.07	.00	19	85	8.6
23	1.8	1.4	.54	1.4	.74	3.3	7.7	.35	.00	10	96	7.7
24	2.1	.54	.54	1.3	.54	1.2	4.6	.35	.00	6.9	61	41
25	2.4	.54	.54	1.6	.54	1.2	3.0	.13	.00	7.3	34	235
26	2.7	.74	.54	.74	.54	1.8	2.4	.00	.00	5.4	20	155
27	2.1	.94	.54	.54	.54	.94	2.1	.00	.14	3.9	29	80
28	.94	1.2	.54	.35	.54	.17	1.8	.00	.00	3.6	58	42
29	.74	1.4	.74	.17	---	.17	2.1	.00	.00	2.1	28	24
30	.74	1.6	.94	.17	---	.17	2.7	.00	3.6	2.6	12	15
31	.74	---	1.2	.35	---	.17	---	.00	---	5.8	11	---
TOTAL	53.26	51.57	20.74	21.60	29.90	168.38	253.53	10.70	3.76	395.0	1069.3	1837.7
MEAN	1.72	1.72	.67	.70	1.07	5.43	8.45	.35	.13	12.8	34.5	61.3
MAX	2.7	7.6	1.4	1.8	2.7	60	30	2.7	3.6	79	149	235
MIN	.74	.05	.06	.17	.54	.17	.17	.00	.00	1.6	1.6	7.7
AC-FT	106	102	41	43	59	334	503	21	7.5	785	2120	3650
CFSM	.05	.05	.02	.02	.03	.15	.24	.01	.00	.36	.97	1.73
IN.	.06	.05	.02	.02	.03	.18	.27	.01	.00	.42	1.12	1.93

CAL YR 1988 TOTAL 5121.33 MEAN 14.0 MAX 371 MIN .00 AC-FT 10160 CFSM .40 IN. 5.38
WTR YR 1989 TOTAL 3916.44 MEAN 10.7 MAX 235 MIN .00 AC-FT 7770 CFSM .30 IN. 4.12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02301900
EXPLANATION
▲ 02301900 STREAM GAGING STATION

Figure 21.--Location of stream gaging stations in the Manatee, Little Manatee, Alafia, and Hillsborough River basins, and Tampa Bay and coastal areas.

HILLSBOROUGH RIVER BASIN

02301900 FOX BRANCH NEAR SOCRUM, FL

LOCATION.--Lat 28°10'55", long 82°00'45", in NE¼ sec.33, T.26 S., R.23 E., Polk County, Hydrologic Unit 03100205, near center of span on downstream side of bridge on Rock Ridge Road, 1.1 mi northeast of Socrum, 8.7 mi upstream from mouth, and 10 mi north of Lakeland.

DRAINAGE AREA.--9.5 mi^2, approximately.

PERIOD OF RECORD.--December 1963 to current year.

REVISED RECORDS.--WRD FL 1969: 1968 (M).

GAGE.--Water-stage recorder. Datum of gage is 110.00 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Oct. 1-6, Oct. 20 to Dec. 1, Dec. 13 to Jan. 27. Records poor. Some diversion at times by pumpage for irrigation.

AVERAGE DISCHARGE.--25 years (water years 1965-89), 8.30 ft^3/s, 11.86 in/yr, 6,010 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 886 ft^3/s, Sept. 7, 1988; maximum gage height, 8.22 ft, July 26, 1978; no flow at times in some years; channel dry at gage for many days in 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 110 ft^3/s and maximum (*):

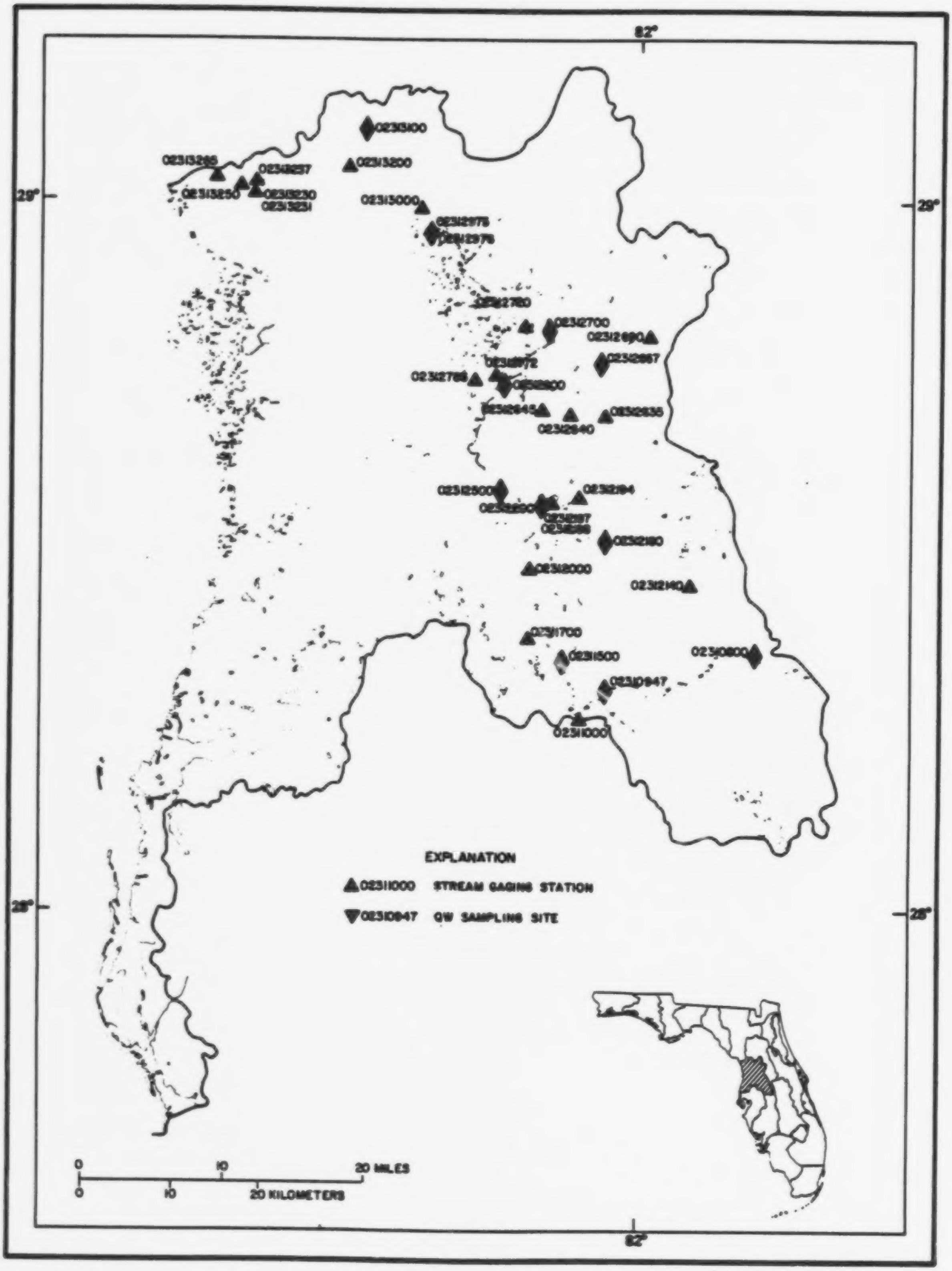
Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 24	----	*90	Unknown				

Minimum discharge, 1.2 ft^3/s, June 3,4, gage height, 2.88 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.8	3.9	9.0	5.4	5.0	2.8	2.9	5.2	1.4	3.0	3.5	4.1
2	6.3	3.7	8.9	5.1	4.5	5.3	2.6	6.3	1.4	2.6	8.6	13
3	5.8	3.6	8.9	4.9	4.3	7.8	2.4	4.0	1.3	3.8	7.2	21
4	7.4	5.7	8.9	4.8	3.8	6.6	2.4	2.9	1.3	3.8	4.6	20
5	6.8	7.5	8.9	4.7	3.6	4.9	3.5	2.4	1.3	2.6	3.2	22
6	6.4	8.0	9.1	4.6	3.4	3.8	4.1	2.1	1.4	2.2	2.4	24
7	6.0	4.3	9.1	4.6	3.4	3.4	3.1	2.1	1.6	2.6	2.0	27
8	5.9	4.0	9.0	4.5	3.3	3.6	2.7	1.9	2.1	2.9	1.8	19
9	5.9	3.8	8.9	4.5	3.2	3.6	2.5	1.9	2.1	2.4	2.0	12
10	5.8	3.7	8.9	4.4	3.1	3.2	2.4	1.9	1.8	1.9	3.4	9.0
11	5.6	3.4	14	4.4	3.1	2.9	2.3	1.8	1.6	1.7	3.7	6.6
12	5.6	3.0	43	4.4	3.0	2.8	2.3	1.8	1.5	2.1	3.5	5.4
13	5.5	2.7	47	4.3	3.0	2.8	2.2	1.7	1.4	3.1	5.1	4.7
14	5.5	2.6	15	4.3	3.0	2.7	2.4	1.7	1.3	3.6	8.6	4.5
15	5.5	2.6	11	4.4	2.9	2.6	2.9	1.7	1.7	3.3	9.0	4.2
16	5.5	2.6	9.4	4.6	2.9	2.6	3.1	1.7	2.1	2.6	5.8	3.6
17	5.5	2.5	8.6	4.4	2.8	2.5	2.8	1.6	2.1	2.5	4.0	3.1
18	5.5	2.5	8.1	4.3	2.7	2.5	2.5	1.6	2.0	4.8	3.0	2.9
19	5.5	2.3	7.7	4.3	2.7	2.5	3.1	1.6	1.8	8.6	2.4	2.9
20	5.4	2.1	7.5	5.3	2.8	2.5	4.6	1.5	1.6	6.4	2.1	2.8
21	5.3	2.0	7.2	13	2.7	2.3	3.6	1.5	2.0	4.2	2.5	2.7
22	5.2	11	6.9	43	2.7	2.3	2.9	1.5	4.6	3.4	2.6	3.0
23	5.1	61	6.7	48	2.7	2.3	2.6	1.5	5.4	5.5	2.4	13
24	5.0	71	6.5	40	2.7	2.3	2.3	1.5	3.7	6.4	2.1	27
25	4.9	55	6.3	22	2.9	2.3	2.2	1.5	2.8	6.3	3.1	30
26	4.9	15	6.3	13	3.3	2.3	2.1	1.4	2.3	5.9	12	41
27	4.9	13	6.2	11	3.2	2.3	2.1	1.4	2.0	4.4	16	48
28	4.7	11	6.1	10	2.8	2.2	2.0	1.4	2.7	3.2	11	38
29	4.5	9.7	6.0	8.7	---	2.2	1.9	1.4	4.6	2.6	7.5	24
30	4.3	9.1	6.0	7.2	---	2.2	2.2	1.4	4.2	2.2	5.4	14
31	4.1	---	5.7	5.9	---	2.6	---	1.4	---	2.2	4.4	---
TOTAL	171.1	332.3	330.8	314.0	89.5	96.7	80.7	63.3	67.1	112.8	154.9	452.5
MEAN	5.52	11.1	10.7	10.1	3.20	3.12	2.69	2.04	2.24	3.64	5.00	15.1
MAX	7.4	71	47	48	5.0	7.8	4.6	6.3	5.4	8.6	16	48
MIN	4.1	2.0	5.7	4.3	2.7	2.2	1.9	1.4	1.3	1.7	1.8	2.7
AC-FT	339	659	656	623	178	192	160	126	133	224	307	898
CFSM	.58	1.17	1.12	1.07	.34	.33	.28	.21	.24	.38	.53	1.59
IN.	.67	1.30	1.30	1.23	.35	.38	.32	.25	.26	.44	.61	1.77

CAL YR 1988 TOTAL 5880.45 MEAN 16.1 MAX 859 MIN .23 AC-FT 11660 CFSM 1.69 IN. 23.03
WTR YR 1989 TOTAL 2265.7 MEAN 6.21 MAX 71 MIN 1.3 AC-FT 4490 CFSM .65 IN. 8.87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EXPLANATION
▲02311000 STREAM GAGING STATION
▼02310947 QW SAMPLING SITE
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20 KILOMETERS

Figure 22.--Location of stream gaging stations in the Withlacoochee River basin and coastal areas.

WITHLACOOCHEE RIVER BASIN

02310800 WITHLACOOCHEE RIVER NEAR EVA, FL

LOCATION.--Lat 28°21'38", long 81°49'08", in NW¼ sec.33, T.24 S., R.25 E., Polk County, Hydrologic Unit 03100208, near center of span on upstream side of bridge on State Highway 33, 2.5 mi north of Eva, 6.5 mi upstream from small tributary, and 138 mi upstream from mouth.

DRAINAGE AREA.--130 mi^2, approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1958 to current year.

GAGE.--Water-stage recorder. Datum of gage is 104.90 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair.

AVERAGE DISCHARGE.--31 years (water years 1959-89), 46.4 ft^3/s, 4.85 in/yr, 33,620 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,160 ft^3/s, Mar. 17, 1960, gage height, 8.90 ft; no flow for many days in some years; minimum gage height, 1.18 ft, May 31, 1981.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 164 ft^3/s, Nov. 23, gage height, 5.42 ft; no flow for many days; minimum gage height, 1.98 ft, June 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23	6.6	72	45	56	16	1.9	.76	.00	17	28	3.9
2	21	6.3	70	42	54	20	1.6	.69	.00	14	29	5.2
3	21	6.2	68	41	53	20	1.4	.52	.00	15	26	14
4	24	9.2	65	40	51	20	1.2	.41	.00	15	23	12
5	24	9.8	64	38	48	20	1.7	.33	.00	14	19	11
6	21	11	66	36	46	19	1.5	.25	.00	14	16	9.9
7	19	9.4	65	35	45	18	1.3	.20	.00	17	13	8.8
8	18	8.6	65	33	43	18	1.1	.15	.04	17	10	8.7
9	18	8.1	64	31	41	18	.94	.09	.14	17	8.3	7.9
10	16	7.5	62	32	41	17	.84	.06	.08	16	6.6	6.9
11	16	6.8	67	31	38	16	.73	.11	.01	17	5.3	5.8
12	16	6.2	87	30	35	15	.66	.07	.00	19	8.2	4.7
13	15	4.9	87	30	33	14	.61	.01	.00	19	13	3.8
14	16	4.0	88	29	34	13	.56	.00	.00	20	12	3.0
15	15	3.8	83	27	32	13	.66	.00	.00	21	11	2.4
16	13	3.8	79	25	30	12	.78	.00	.00	22	9.2	1.9
17	12	3.7	77	25	28	11	.69	.00	.00	22	7.5	1.9
18	13	3.7	70	24	26	9.9	.63	.00	.00	22	6.0	5.5
19	13	3.5	65	23	25	8.9	.53	.00	.00	22	5.4	5.8
20	12	2.8	64	22	25	8.0	.48	.00	.00	20	5.1	4.8
21	12	2.2	62	28	24	7.1	.43	.00	.40	19	6.1	3.9
22	12	3.5	60	74	24	6.3	.36	.00	1.8	18	4.7	3.6
23	11	131	58	84	22	5.7	.30	.00	.99	18	3.8	9.2
24	9.8	151	56	79	21	5.2	.23	.00	1.1	17	2.9	11
25	9.8	130	54	73	20	4.6	.19	.00	2.2	16	2.6	12
26	9.6	108	52	70	19	4.0	.12	.00	1.6	14	3.3	14
27	9.2	94	50	67	18	3.5	.07	.00	1.3	13	2.7	15
28	8.3	84	50	65	17	3.0	.02	.00	14	11	3.8	16
29	7.9	77	49	63	---	2.6	.04	.00	18	14	7.1	15
30	7.2	73	48	60	---	2.4	.24	.00	14	35	5.6	14
31	6.4	---	48	58	---	2.2	---	.00	---	24	4.3	---
TOTAL	449.2	979.6	2015	1360	949	353.4	21.81	3.65	55.66	559	308.5	241.6
MEAN	14.5	32.7	65.0	43.9	33.9	11.4	.73	.12	1.86	18.0	9.95	8.05
MAX	24	151	88	84	56	20	1.9	.76	18	35	29	16
MIN	6.4	2.2	48	22	17	2.2	.02	.00	.00	11	2.6	1.9
AC-FT	891	1940	4000	2700	1880	701	43	7.2	110	1110	612	479
CFSM	.11	.25	.50	.34	.26	.09	.01	.00	.01	.14	.08	.06
IN.	.13	.28	.58	.39	.27	.10	.01	.00	.02	.16	.09	.07

CAL YR 1988 TOTAL 8525.42 MEAN 23.3 MAX 151 MIN .05 AC-FT 16910 CFSM .18 IN. 2.44
WTR YR 1989 TOTAL 7296.42 MEAN 20.0 MAX 151 MIN .00 AC-FT 14470 CFSM .15 IN. 2.09

02310800 WITHLACOOCHEE RIVER NEAR EVA, FL--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1956, 1958-61, 1963 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1964 to September 1987.
WATER TEMPERATURE: October 1964 to September 1987.

INSTRUMENTATION.--Specific conductance and water temperature recorder from Nov. 3, 1976 to Sept. 30, 1987.

REMARKS.--Interruptions of record were due to instrument malfunctions.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum observed, 415 microsiemens, Apr. 14, 1975; minimum observed, 35 microsiemens, June 11, 1977.
WATER TEMPERATURE: Maximum daily mean, 34.0°C, June 24,28, 1977; minimum observed, 5.0°C, Jan. 31, Feb. 1, 1966.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	OXYGEN, DIS-SOLVED (MG/L) (00300)	NITRO-GEN, NITRITE TOTAL (MG/L AS N) (00615)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS-PHOROUS TOTAL (MG/L AS P) (00665)	PHOS-PHORUS, ORTHO, TOTAL (MG/L AS P) (70507)
OCT												
04...	1440	31	76	4.8	25.5	1.5	E0.020	E0.020	E0.010	E1.6	E0.040	E0.030
11...	1200	17	84	4.3	20.0	3.2	0.020	0.020	<0.010	1.8	0.040	0.030
31...	1040	8.1	123	4.1	21.0	2.2	0.020	0.210	<0.010	1.8	0.050	0.030
NOV												
30...	1125	74	71	4.3	17.5	3.4	0.010	<0.020	0.010	1.5	0.030	0.020
DEC												
29...	1120	49	76	3.4	18.0	3.5	0.020	0.020	0.010	1.4	0.800	0.800
FEB												
01...	1050	58	83	4.2	19.0	3.8	0.010	<0.020	<0.010	1.0	0.100	0.100
28...	1502	19	120	3.9	16.5	5.8	0.010	<0.020	<0.010	1.2	0.050	0.030
MAR												
23...	1205	5.8	90	3.5	22.0	3.3	0.020	0.030	<0.010	1.3	0.040	0.030
APR												
28...	1210	0.35	85	4.7	24.0	--	<0.010	0.020	0.070	0.40	0.040	0.030
JUN												
28...	1400	11	83	4.4	27.5	6.4	0.010	<0.020	0.020	1.3	0.040	0.050
JUL												
10...	1230	17	77	--	27.5	3.0	<0.010	<0.020	0.020	1.9	0.040	0.050
31...	1420	27	79	4.0	27.5	7.7	0.010	<0.020	<0.010	1.6	0.040	0.040
AUG												
24...	1300	2.9	72	4.0	27.5	1.7	0.010	0.070	<0.010	1.6	0.040	0.030

DATE	COLOR (PLAT-INUM-COBALT UNITS) (00080)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY LAB (MG/L AS CACO3) (90410)
OCT							
11...	560	15	3.7	1.5	5.6	0.50	<0.1
AUG							
24...	480	19	5.0	1.6	6.2	0.30	<0.1

DATE	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	STRON-TIUM, DIS-SOLVED (UG/L AS SR) (01080)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
OCT							
11...	5.7	12	0.40	5.6	168	40	--
AUG							
24...	0.40	11	0.40	4.1	140	70	52

WITHLACOOCHEE RIVER BASIN

02310947 WITHLACOOCHEE RIVER NEAR CUMPRESSCO, FL

LOCATION.--Lat 28°18'42", long 82°03'22", in NE¼ sec.13, T.25 S., R.22 E., Pasco County, Hydrologic Unit 03100208, near left bank on downstream side of bridge on State Highway 471, 0.6 mi upstream from Gator Creek, 3.4 mi south of Cumpressco, 5.8 mi east of Richland, and 120 mi upstream from mouth.

DRAINAGE AREA.--280 mi^2, approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--January 1967 to current year.

GAGE.--Water-stage recorder. Datum of gage is 75.00 ft above National Geodetic Vertical Datum of 1929 (Florida Department of Transportation bench mark). Prior to Aug. 3, 1978, at datum 5.00 ft higher.

REMARKS.--Estimated daily discharges: July 12-25, Aug 8-24. Records fair. Records are for flow of main channel only, which normally includes all the flow. Some interconnection with Gator Creek and some diversions to the north probably exist during periods of extreme high water.

AVERAGE DISCHARGE.--22 years (water years 1968-89), 144 ft^3/s, 104,330 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,260 ft^3/s, Apr. 1, 1987, gage height, 14.03 ft; no flow for many days in most years; river dry at gage for many days in some years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 981 ft^3/s, Nov. 27,28; gage height, 11.34 ft; no flow for many days; minimum gage height, 4.44 ft, June 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	285	16	835	117	533	48	5.9	4.9	.73	.37	44	39
2	257	15	766	110	468	59	5.1	9.2	.63	1.5	79	41
3	267	14	694	104	413	66	4.5	8.3	.54	17	128	47
4	275	19	628	96	368	68	4.5	8.5	.48	50	189	53
5	252	23	567	88	331	66	6.3	8.3	.50	68	239	53
6	223	24	504	82	299	61	5.9	6.6	.55	75	250	50
7	195	24	438	79	271	58	4.7	4.8	.78	72	229	43
8	173	24	385	75	248	56	4.0	3.4	.92	65	202	42
9	154	24	342	72	226	54	3.7	2.5	.50	58	185	38
10	140	22	306	68	203	54	3.5	1.9	.28	50	162	42
11	129	21	296	66	185	52	3.2	1.4	.20	43	143	49
12	120	21	342	63	170	48	3.0	1.1	.17	39	129	53
13	108	21	347	61	157	45	2.7	.96	.08	37	113	55
14	97	22	345	58	145	41	2.5	.83	.03	36	102	53
15	87	23	345	54	134	37	2.6	.85	.00	36	93	49
16	78	23	347	52	124	33	3.0	.84	.00	35	84	44
17	70	22	339	49	114	30	2.8	.71	.00	35	76	38
18	63	21	320	47	104	28	2.5	.63	.00	34	69	33
19	57	21	297	44	96	25	2.4	.66	.00	32	63	28
20	52	19	279	42	90	22	2.3	.67	.00	40	57	24
21	47	18	266	56	84	19	2.0	1.4	.00	47	53	21
22	42	23	239	170	79	17	1.8	2.5	.00	55	47	21
23	37	511	218	259	74	15	1.6	2.0	.00	64	43	26
24	33	716	202	361	67	14	1.4	1.6	.00	68	38	33
25	30	860	187	544	62	13	1.3	1.1	.00	58	35	34
26	27	941	173	682	58	12	1.1	.82	.00	51	52	40
27	24	978	159	744	54	11	1.0	.62	.00	43	72	44
28	22	974	149	742	50	9.1	1.0	.55	.09	36	84	43
29	20	935	139	704	---	7.8	.93	.67	.29	30	74	41
30	18	890	131	653	---	6.9	1.2	.79	.41	26	60	38
31	17	---	123	595	---	6.4	---	.82	---	26	48	---
TOTAL	3399	7265	10708	6937	5207	1082.2	88.43	78.92	7.18	1327.87	3242	1215
MEAN	110	242	345	224	186	34.9	2.95	2.58	.24	42.8	105	40.5
MAX	285	978	835	744	533	68	6.3	9.2	.92	75	250	55
MIN	17	14	123	42	50	6.4	.93	.55	.00	.37	35	21
AC-FT	6740	14410	21240	13760	10330	2150	175	159	14	2630	6430	2410

CAL YR 1988 TOTAL 73321.25 MEAN 200 MAX 1810 MIN .53 AC-FT 145400
WTR YR 1989 TOTAL 40558.60 MEAN 111 MAX 978 MIN .00 AC-FT 80450

02310947 WITHLACOOCHEE RIVER NEAR CUMPRESSCO, FL--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1961, 1965, 1967 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	OXYGEN, DIS-SOLVED (MG/L) (00300)	NITRO-GEN, NITRITE TOTAL (MG/L AS N) (00615)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS-PHOROUS TOTAL (MG/L AS P) (00665)	PHOS-PHORUS, ORTHO, TOTAL (MG/L AS P) (70507)
OCT												
04...	1335	266	85	5.9	24.5	2.3	E0.020	E0.030	E0.010	E1.7	E0.120	E0.110
11...	1315	80	94	6.4	22.0	4.0	0.020	0.020	<0.010	1.8	0.100	0.080
31...	0925	12	164	7.1	21.0	4.2	0.020	0.040	<0.010	1.6	0.080	0.070
NOV												
30...	1225	1000	65	6.2	17.5	6.1	0.010	<0.020	<0.010	1.0	0.050	0.040
DEC												
29...	0955	195	91	6.3	18.0	5.9	0.020	0.020	0.010	1.4	0.290	0.270
JAN												
30...	0855	710	88	7.1	18.5	5.3	0.010	<0.020	<0.010	0.89	0.040	0.030
FEB												
28...	1210	50	140	7.2	16.5	7.8	0.010	0.020	<0.010	1.1	0.030	0.010
MAR												
23...	0740	15	121	6.9	22.0	4.5	0.010	0.060	0.010	1.2	0.060	0.050
APR												
28...	1310	1.3	394	8.2	25.0	4.6	0.010	<0.020	0.060	0.80	0.070	0.060
MAY												
11...	0800	1.5	181	7.0	22.5	5.2	0.010	0.020	0.030	0.87	0.040	0.050
31...	1405	1.1	415	7.9	27.5	4.2	<0.010	<0.020	0.040	0.42	<0.020	0.020
JUL												
10...	0845	52	121	--	26.0	2.0	<0.010	<0.020	0.040	2.3	0.060	0.050
31...	1250	28	111	7.1	27.5	7.5	0.010	0.020	<0.010	2.0	0.070	0.040
AUG												
24...	0920	40	100	6.5	26.5	1.9	0.010	<0.020	<0.010	1.6	0.030	0.030

DATE	COLOR (PLAT-INUM-COBALT UNITS) (00080)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY LAB (MG/L AS CACO3) (90410)
OCT							
11...	480	36	11	2.1	5.8	1.3	21
MAY							
11...	160	72	24	3.0	9.1	0.60	64
AUG							
24...	400	45	14	2.3	6.5	0.70	18

DATE	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	STRON-TIUM, DIS-SOLVED (UG/L AS SR) (01080)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
OCT							
11...	1.1	12	0.50	6.8	170	70	--
MAY							
11...	5.6	14	0.40	3.4	143	180	22
AUG							
24...	9.0	11	0.50	6.2	171	100	48

WITHLACOOCHEE RIVER BASIN

02311000 WITHLACOOCHEE-HILLSBOROUGH OVERFLOW NEAR RICHLAND, FL

LOCATION.--Lat 28°16'16", long 82°05'53", in NW¼ sec.34, T.25 S., R.22 E., Pasco County, Hydrologic Unit 03100208, near left bank, at downstream side of bridge on U.S. Highway 98, 0.6 mi south of channel of Withlacoochee River, 2.9 mi east of Richland, 8.5 mi southeast of Dade City, and 55 mi upstream from mouth.

DRAINAGE AREA.--Indeterminate.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--February 1930 to September 1931; September 1950, July 1958 to March 1960 (discharge measurements only); April 1960 to current year. Published as supplement to Hillsborough River near Zephyrhills (station 02303000) July 1958 to September 1959.

GAGE.--Water-stage recorder. Datum of gage is 75.42 ft above National Geodetic Vertical Datum of 1929 (Florida Department of Transportation bench mark). Prior to July 17, 1958, nonrecording gage at site about 1 mi downstream at different datum; July 17, 1958, to Apr. 24, 1960, nonrecording gage and crest-stage gage at present site and datum.

REMARKS.--Records fair. Flow is uncontrolled natural diversion from the Withlacoochee River basin to the Hillsborough River basin.

AVERAGE DISCHARGE.--30 years (water years 1931, 1961-89), 21.3 ft^3/s, 15,430 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,880 ft^3/s, Mar. 19, 1960, gage height, 6.87 ft, from crest-stage gage; no flow for many days in some years; channel dry at gage for many days most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 361 ft^3/s, Nov. 28, gage height, 4.87 ft; no flow for many days; channel dry at gage for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e10	.00	264	1.5	49	.00	.00	.00	.00	.00	.00	.00
2	e7.5	.00	223	1.2	37	.00	.00	.00	.00	.00	.00	.00
3	e8.5	.00	185	.90	27	.00	.00	.00	.00	.00	.00	.00
4	e9.3	.00	147	.41	20	.00	.00	.00	.00	.00	.00	.00
5	e7.9	.00	113	.00	15	.00	.00	.00	.00	.00	.59	.00
6	e6.2	.00	85	.00	12	.00	.00	.00	.00	.00	3.7	.00
7	3.4	.00	64	.00	8.8	.00	.00	.00	.00	.00	4.9	.00
8	1.5	.00	49	.00	6.7	.00	.00	.00	.00	.00	3.8	.00
9	.51	.00	37	.00	5.0	.00	.00	.00	.00	.00	3.2	.00
10	.00	.00	27	.00	3.4	.00	.00	.00	.00	.00	3.2	.00
11	.00	.00	25	.00	2.4	.00	.00	.00	.00	.00	1.8	.00
12	.00	.00	33	.00	2.0	.00	.00	.00	.00	.00	1.2	.00
13	.00	.00	35	.00	1.6	.00	.00	.00	.00	.00	.80	.00
14	.00	.00	36	.00	1.2	.00	.00	.00	.00	.00	.00	.00
15	.00	.00	36	.00	.73	.00	.00	.00	.00	.00	.00	.00
16	.00	.00	35	.00	.27	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	33	.00	.00	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	29	.00	.00	.00	.00	.00	.00	.00	.00	.00
19	.00	.00	24	.00	.00	.00	.00	.00	.00	.00	.00	.00
20	.00	.00	20	.00	.00	.00	.00	.00	.00	.00	.00	.00
21	.00	.00	17	.15	.00	.00	.00	.00	.00	.00	.00	.00
22	.00	.28	14	4.2	.00	.00	.00	.00	.00	.00	.00	.00
23	.00	71	11	13	.00	.00	.00	.00	.00	.00	.00	.00
24	.00	171	9.0	24	.00	.00	.00	.00	.00	.00	.00	.00
25	.00	253	7.2	42	.00	.00	.00	.00	.00	.00	.00	.00
26	.00	316	5.7	65	.00	.00	.00	.00	.00	.00	.00	.00
27	.00	351	4.6	83	.00	.00	.00	.00	.00	.00	.00	.00
28	.00	356	3.4	90	.00	.00	.00	.00	.00	.00	.00	.00
29	.00	334	2.6	86	---	.00	.00	.00	.00	.00	.00	.00
30	.00	301	2.2	76	---	.00	.00	.00	.00	.00	.00	.00
31	.00	---	1.9	62	---	.00	---	.00	---	.00	.00	---
TOTAL	54.81	2153.28	1578.6	549.36	192.10	0.00	0.00	0.00	0.00	0.00	23.19	0.00
MEAN	1.77	71.8	50.9	17.7	6.86	.00	.00	.00	.00	.00	.75	.00
MAX	10	356	264	90	49	.00	.00	.00	.00	.00	4.9	.00
MIN	.00	.00	1.9	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	109	4270	3130	1090	381	.0	.0	.0	.0	.0	46	.0

CAL YR 1988 TOTAL 17723.95 MEAN 48.4 MAX 1020 MIN .00 AC-FT 35160
WTR YR 1989 TOTAL 4551.34 MEAN 12.5 MAX 356 MIN .00 AC-FT 9030

e Estimated

02311000 WITHLACOOCHEE-HILLSBOROUGH OVERFLOW NEAR RICHLAND, FL--Continued

GAGE HEIGHT, IN FEET ABOVE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	2.66	4.59	3.04	3.56	2.79	2.53	2.44	---	1.81	2.61	2.84
2	---	2.64	4.45	3.03	3.47	2.86	2.50	2.50	---	1.94	2.59	2.86
3	---	2.63	4.30	3.01	3.39	2.87	2.46	2.48	---	2.33	2.56	2.83
4	---	2.72	4.14	3.00	3.32	2.86	2.51	2.45	---	2.35	2.67	2.81
5	---	2.76	3.98	2.98	3.26	2.85	2.83	2.41	---	2.31	2.91	2.80
6	---	2.79	3.84	2.96	3.21	2.84	2.80	2.36	---	2.30	3.05	2.80
7	3.08	2.77	3.73	2.94	3.16	2.83	2.76	2.31	---	2.37	3.08	2.80
8	3.04	2.75	3.62	2.93	3.12	2.82	2.74	2.25	---	2.37	3.06	2.79
9	3.00	2.74	3.53	2.92	3.08	2.81	2.71	2.18	---	2.37	3.04	2.77
10	2.96	2.73	3.45	2.91	3.05	2.81	2.68	2.12	---	2.35	3.04	2.75
11	2.94	2.72	3.43	2.90	3.02	2.80	2.66	2.06	---	2.31	2.99	2.73
12	2.92	2.72	3.50	2.90	3.00	2.79	2.64	1.97	---	2.28	2.97	2.72
13	2.90	2.71	3.52	2.89	2.99	2.78	2.61	1.90	---	2.25	2.95	2.70
14	2.88	2.70	3.52	2.88	2.97	2.77	2.59	1.82	---	2.23	2.90	2.69
15	2.87	2.69	3.52	2.87	2.95	2.76	2.60	1.74	---	2.18	2.86	2.68
16	2.85	2.68	3.52	2.86	2.93	2.75	2.63	1.65	---	2.15	2.83	2.68
17	2.83	2.68	3.50	2.85	2.92	2.75	2.61	1.54	---	2.16	2.81	2.67
18	2.82	2.67	3.47	2.84	2.90	2.74	2.58	1.44	---	2.16	2.78	2.66
19	2.81	2.66	3.42	2.83	2.88	2.73	2.57	1.33	---	2.28	2.77	2.66
20	2.80	2.66	3.38	2.83	2.87	2.71	2.58	1.22	---	2.29	2.76	2.64
21	2.78	2.65	3.34	2.91	2.86	2.70	2.56	1.15	---	2.31	2.75	2.61
22	2.78	2.73	3.30	3.11	2.85	2.68	2.53	1.11	---	2.67	2.72	2.63
23	2.76	3.73	3.26	3.28	2.84	2.69	2.49	.99	.45	2.81	2.69	2.81
24	2.75	4.24	3.23	3.40	2.82	2.69	2.45	.87	.51	2.80	2.67	2.84
25	2.74	4.55	3.20	3.54	2.81	2.67	2.41	.75	.52	2.79	2.68	2.83
26	2.73	4.75	3.16	3.69	2.81	2.65	2.35	.64	.45	2.77	2.78	2.83
27	2.71	4.84	3.13	3.79	2.80	2.63	2.30	.54	---	2.74	2.78	2.81
28	2.70	4.86	3.11	3.82	2.79	2.61	2.24	.46	.80	2.72	2.85	2.79
29	2.69	4.80	3.09	3.80	---	2.58	2.18	---	1.68	2.70	2.87	2.77
30	2.68	4.71	3.07	3.74	---	2.57	2.18	---	1.80	2.67	2.86	2.77
31	2.67	---	3.06	3.65	---	2.56	---	---	---	2.63	2.84	---
MEAN	---	3.20	3.53	3.13	3.02	2.74	2.54	---	---	2.40	2.83	2.75
MAX	---	4.86	4.59	3.82	3.56	2.87	2.83	---	---	2.81	3.08	2.86
MIN	---	2.63	3.06	2.83	2.79	2.56	2.18	---	---	1.81	2.56	2.61

02311000 WITHLACOOCHEE-HILLSBOROUGH OVERFLOW NEAR RICHLAND, FL--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1961, 1963, 1966, 1969-70, 1972-84, 1989.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	OXYGEN, DIS-SOLVED (MG/L) (00300)	NITRO-GEN, NITRITE TOTAL (MG/L AS N) (00615)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS-PHOROUS TOTAL (MG/L AS P) (00665)	PHOS-PHORUS, ORTHO, TOTAL (MG/L AS P) (70507)
OCT												
07...	1230	2.9	179	6.9	22.0	1.1	0.010	<0.020	0.010	1.4	0.160	0.100
NOV												
30...	1255	298	--	5.5	17.5	4.0	0.010	<0.020	<0.010	1.1	0.080	0.060
JAN												
30...	1140	76	96	7.1	19.5	2.4	0.010	<0.020	<0.010	0.97	0.060	0.060

DATE	COLOR (PLAT-INUM-COBALT UNITS) (00080)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY LAB (MG/L AS CACO3) (90410)
OCT							
07...	220	84	29	2.8	5.2	1.5	73

DATE	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	STRON-TIUM, DIS-SOLVED (UG/L AS SR) (01080)
OCT						
07...	0.90	10	0.40	9.0	175	110

WITHLACOOCHEE RIVER BASIN

02311500 WITHLACOOCHEE RIVER NEAR DADE CITY, FL

LOCATION.--Lat 28°21'08", long 82°07'34", in SE¼ sec.32, T.24 S., R.22 E., Pasco County, Hydrologic Unit 03100208, on left bank 50 ft downstream from Lanier Bridge on River Road, 4 mi east of Dade City, and 110 mi upstream from mouth.

DRAINAGE AREA.--390 mi^2, approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--February 1930 to March 1933, July 1958 to October 1962 (discharge measurements only), water years 1959-62 (annual maximum), January 1964 to September 1983 (discharge measurements and gage heights only); October 1983 to current year.

REVISED RECORDS.--WRD FL 1962: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929. Feb. 11, 1930 to Mar. 31, 1933, and July 21 to Nov. 19, 1958, nonrecording gage, and Nov. 20, 1958 to Oct. 3, 1962, nonrecording gage and crest-stage gage at same site at datum 64.29 ft higher. Jan. 21, 1964 to Oct. 8, 1987, nonrecording gage at same site and datum.

REMARKS.--Records fair. High-water diversion above station into Hillsborough River basin through Withlacoochee-Hillsborough Overflow near Richland (station 02311000).

AVERAGE DISCHARGE.--8 years (water years 1931-32, 1984-89), 178 ft^3/s, 128,960 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,900 ft^3/s, Mar. 21, 1960, gage height, 78.57 ft, present datum, from rating curve extended above 3,600 ft^3/s; no flow at times in some years; minimum gage height observed, 66.39 ft, June 1, 1981.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,270 ft^3/s, Nov. 28,29, maximum gage height, 75.16 ft Nov. 29; minimum, 7.2 ft^3/s, June 4-6; gage height, 69.13 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	340	31	1200	226	549	85	26	20	9.0	e39	51	129
2	317	29	1120	215	507	101	23	32	8.2	e33	45	146
3	299	27	1030	206	464	114	22	33	7.6	e36	44	133
4	289	31	940	195	425	116	22	34	7.3	e32	60	119
5	277	35	846	185	387	114	34	31	7.2	e30	96	109
6	268	38	755	175	356	112	45	28	7.6	30	139	107
7	254	39	674	167	329	107	47	25	9.8	59	177	106
8	237	41	604	159	307	102	41	23	13	76	196	103
9	221	41	547	152	281	96	34	21	14	82	205	96
10	204	41	498	145	258	92	28	19	13	81	215	88
11	189	41	477	140	241	87	24	18	11	74	211	80
12	176	40	485	135	226	85	22	16	10	68	208	72
13	163	39	468	130	215	81	22	15	10	63	203	68
14	151	38	460	125	205	78	22	14	10	58	187	67
15	141	36	459	120	195	74	23	15	9.5	51	166	68
16	130	34	461	116	185	72	28	14	9.0	46	147	67
17	121	33	458	112	173	71	26	13	9.1	44	132	65
18	111	32	450	106	162	68	24	12	9.1	43	120	66
19	103	31	437	100	152	63	22	11	9.1	41	108	60
20	93	30	422	96	143	57	21	11	9.1	43	96	54
21	85	30	406	118	134	52	21	10	9.8	47	85	47
22	78	37	388	202	130	48	20	12	12	60	77	42
23	71	358	370	260	123	46	19	13	15	69	67	55
24	64	601	352	326	113	44	17	14	17	69	61	66
25	58	819	333	388	106	42	17	15	17	69	60	72
26	52	1000	315	450	99	38	18	14	15	69	72	76
27	47	1150	296	516	93	35	17	12	12	81	74	72
28	43	1240	279	574	86	33	15	11	11	80	88	72
29	39	1270	264	606	---	31	14	10	e44	69	104	75
30	37	1250	249	609	---	29	14	9.8	e47	60	119	78
31	34	---	237	588	---	27	---	9.0	---	51	127	---
TOTAL	4692	8462	16280	7642	6644	2200	728	534.8	392.4	1753	3740	2458
MEAN	151	282	525	247	237	71.0	24.3	17.3	13.1	56.5	121	81.9
MAX	340	1270	1200	609	549	116	47	34	47	82	215	146
MIN	34	27	237	96	86	27	14	9.0	7.2	30	44	42
AC-FT	9310	16780	32290	15160	13180	4360	1440	1060	778	3480	7420	4880

CAL YR 1988 TOTAL 98757.6 MEAN 270 MAX 2980 MIN 6.2 AC-FT 195900
WTR YR 1989 TOTAL 55526.2 MEAN 152 MAX 1270 MIN 7.2 AC-FT 110100

e Estimated

02311500 WITHLACOOCHEE RIVER NEAR DADE CITY, FL--Continued

GAGE HEIGHT, IN FEET ABOVE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	72.61	70.14	75.02	71.88	73.33	70.80	69.96	69.72	69.24	---	70.31	71.32
2	72.51	70.10	74.85	71.82	73.19	70.97	69.91	70.03	69.20	---	70.23	71.47
3	72.42	70.05	74.65	71.75	73.03	71.11	69.86	70.04	69.16	---	70.21	71.35
4	72.38	70.13	74.43	71.68	72.87	71.12	69.85	70.05	69.14	---	70.44	71.22
5	72.32	70.19	74.19	71.61	72.72	71.10	70.13	69.99	69.13	---	70.84	71.12
6	72.26	70.25	73.95	71.54	72.59	71.08	70.31	69.93	69.15	---	71.25	71.10
7	72.19	70.27	73.72	71.48	72.46	71.05	70.34	69.87	69.29	70.43	71.55	71.09
8	72.09	70.29	73.51	71.41	72.35	71.00	70.24	69.80	69.43	70.64	71.69	71.07
9	71.99	70.29	73.32	71.36	72.22	70.94	70.11	69.74	69.48	70.70	71.75	71.00
10	71.89	70.29	73.15	71.30	72.10	70.90	70.00	69.68	69.43	70.68	71.82	70.92
11	71.79	70.28	73.07	71.26	72.00	70.86	69.91	69.64	69.36	70.61	71.80	70.82
12	71.69	70.26	73.10	71.22	71.91	70.83	69.87	69.59	69.31	70.54	71.79	70.73
13	71.60	70.24	73.03	71.17	71.85	70.79	69.85	69.54	69.30	70.47	71.76	70.68
14	71.50	70.21	73.00	71.13	71.79	70.75	69.84	69.50	69.31	70.41	71.66	70.66
15	71.42	70.18	73.00	71.08	71.72	70.72	69.87	69.52	69.27	70.32	71.52	70.67
16	71.33	70.15	73.01	71.04	71.65	70.70	69.99	69.50	69.24	70.24	71.37	70.66
17	71.24	70.12	73.00	71.00	71.57	70.68	69.94	69.45	69.25	70.22	71.25	70.64
18	71.15	70.10	72.96	70.94	71.49	70.64	69.88	69.40	69.25	70.20	71.15	70.65
19	71.07	70.08	72.91	70.89	71.41	70.59	69.83	69.36	69.25	70.17	71.04	70.58
20	70.98	70.06	72.85	70.85	71.33	70.52	69.81	69.33	69.25	70.19	70.93	70.50
21	70.89	70.05	72.79	71.06	71.25	70.46	69.79	69.33	69.29	70.26	70.83	70.40
22	70.81	70.15	72.71	71.72	71.23	70.39	69.77	69.42	69.39	70.43	70.75	70.32
23	70.73	72.59	72.63	72.08	71.16	70.36	69.73	69.47	69.53	70.55	70.64	70.50
24	70.65	73.50	72.55	72.42	71.07	70.33	69.67	69.48	69.62	70.55	70.58	70.65
25	70.57	74.13	72.46	72.71	71.01	70.29	69.64	69.53	69.60	70.55	70.56	70.72
26	70.49	74.57	72.37	72.96	70.95	70.23	69.67	69.48	69.51	70.55	70.72	70.77
27	70.42	74.91	72.28	73.21	70.89	70.17	69.64	69.40	69.40	70.68	70.75	70.72
28	70.35	75.10	72.19	73.41	70.82	70.12	69.55	69.35	---	70.68	70.91	70.72
29	70.29	75.15	72.10	73.51	---	70.08	69.52	69.31	---	70.56	71.08	70.75
30	70.24	75.11	72.02	73.52	---	70.04	69.51	69.29	---	70.43	71.23	70.79
31	70.19	---	71.95	73.46	---	70.00	---	69.25	---	70.32	71.30	---
MEAN	71.36	71.30	73.12	71.82	71.86	70.63	69.87	69.58	---	---	71.09	70.82
MAX	72.61	75.15	75.02	73.52	73.33	71.12	70.34	70.05	---	---	71.82	71.47
MIN	70.19	70.05	71.95	70.85	70.82	70.00	69.51	69.25	---	---	70.21	70.32

02311500 WITHLACOOCHEE RIVER NEAR DADE CITY, FL--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1958-61, 1963, 1966 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: July 1966 to March 1971, November 1972 to current year.
WATER TEMPERATURE: July 1966 to March 1971, November 1972 to current year.

REMARKS.--Specific conductance and water temperature are measured by local observer.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum observed, 437 microsiemens, May 1, 1976; minimum observed, 45 microsiemens, Sept. 17,18, 1968.
WATER TEMPERATURE: Maximum observed, 34.0°C, July 9, 1969, June 17,18, July 10, 1981; minimum observed, 6.0°C, Jan. 20, 1977.

EXTREMES OUTSIDE PERIOD OF DAILY RECORD.--A specific conductance of 44 microsiemens was observed on Oct 14, 1959.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum observed, 378 microsiemens, June 8; minimum observed, 66 microsiemens, Nov. 30.
WATER TEMPERATURE: Maximum observed, 29.0°C, many days in June, July, and August; minimum observed, 12.0°C, Dec. 19, Feb. 25.

SPECIFIC CONDUCTANCE, (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
INSTANT VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	88	178	67	---	93	---	251	334	366	269	---	146
2	---	181	70	118	94	182	249	328	368	263	---	131
3	90	183	70	122	95	177	251	297	365	279	229	---
4	92	185	---	123	97	177	256	305	371	264	225	147
5	94	189	75	125	---	---	263	309	365	277	203	164
6	94	---	---	124	101	187	254	316	362	287	169	200
7	97	234	80	126	112	188	248	---	370	279	148	164
8	97	194	81	127	105	187	235	320	378	---	138	---
9	---	195	83	130	112	183	256	320	377	248	129	164
10	101	197	---	132	111	184	253	321	---	241	124	167
11	104	200	---	134	113	185	257	318	371	237	124	171
12	107	202	86	135	118	187	265	318	367	232	119	177
13	109	---	89	137	124	189	273	318	372	230	125	184
14	111	204	92	138	134	189	---	318	364	223	126	188
15	113	206	93	140	144	187	---	317	370	225	130	190
16	---	205	92	---	149	---	294	319	372	227	136	190
17	118	207	93	146	153	188	287	320	375	---	---	190
18	121	213	---	148	156	194	291	321	---	231	156	186
19	122	209	95	148	---	---	297	324	372	237	155	---
20	125	---	96	152	161	---	302	329	367	235	159	192
21	127	211	96	---	164	209	308	331	360	238	172	226
22	128	---	97	122	166	214	310	335	360	230	177	202
23	---	86	100	126	166	215	---	348	357	---	171	210
24	136	92	102	131	166	219	311	348	345	194	191	190
25	138	83	105	121	171	221	314	347	331	188	192	191
26	144	73	107	112	174	---	321	366	331	190	150	190
27	149	70	109	104	177	227	324	358	329	199	176	202
28	151	69	109	99	188	231	326	358	324	---	175	225
29	158	67	111	---	---	236	333	359	313	198	178	208
30	---	66	112	94	---	240	---	362	285	204	164	209
31	165	---	115	93	---	245	---	364	---	205	155	---

02311500 WITHLACOOCHEE RIVER NEAR DADE CITY, FL--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
INSTANT VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27.0	22.0	18.0	---	21.0	---	20.0	23.0	28.0	27.0	---	28.0
2	---	20.0	15.0	21.0	21.0	17.0	22.0	23.0	29.0	27.5	---	28.0
3	26.0	20.0	16.0	21.0	22.0	20.0	22.0	24.0	29.0	28.5	28.0	---
4	25.0	21.0	---	19.0	22.0	22.0	22.0	24.0	27.0	28.0	28.0	27.0
5	25.0	21.0	16.0	16.0	---	---	22.0	24.0	27.0	28.0	29.0	27.0
6	25.0	---	---	17.0	23.0	22.0	20.0	24.0	26.0	27.5	28.0	28.0
7	23.0	20.0	18.0	18.0	23.0	19.0	20.0	---	26.0	28.0	28.0	28.0
8	22.0	19.0	18.0	19.0	22.0	17.0	20.0	23.0	27.0	---	28.0	---
9	---	19.0	19.0	19.0	20.0	15.0	21.0	23.0	27.0	28.0	27.0	28.0
10	22.0	19.0	---	20.0	17.0	14.0	21.0	23.0	---	29.0	27.0	27.0
11	22.0	20.0	---	20.0	15.0	15.0	19.0	24.0	28.0	28.0	27.0	28.0
12	21.0	22.0	17.0	21.0	16.0	16.0	19.0	23.0	28.0	27.0	25.0	28.0
13	20.0	---	---	22.0	18.0	18.0	20.0	23.0	29.0	28.0	27.0	28.0
14	21.0	20.0	15.0	22.0	23.0	20.0	---	24.0	29.0	28.0	27.0	27.0
15	21.0	20.0	15.0	21.0	20.0	21.0	---	24.0	29.0	27.0	27.0	28.0
16	---	22.0	17.0	---	21.0	---	23.0	25.0	29.0	28.0	28.0	28.0
17	22.0	22.0	13.0	21.0	21.0	21.0	22.0	26.0	29.0	---	---	27.0
18	23.0	22.0	---	19.0	20.0	22.0	23.0	27.0	---	28.0	29.0	27.0
19	24.0	23.0	12.0	19.0	---	---	23.0	25.0	28.0	28.0	27.0	---
20	24.0	---	13.0	19.0	21.0	---	23.0	26.0	27.0	28.0	26.0	26.0
21	23.0	23.0	15.0	---	22.0	23.0	22.0	26.0	28.0	28.0	28.0	26.0
22	22.0	21.0	16.0	15.0	20.0	22.0	23.0	26.0	28.0	27.0	28.0	26.0
23	---	21.0	17.0	17.0	15.0	22.0	---	26.0	26.0	---	28.0	25.0
24	22.0	20.0	18.0	17.0	18.0	21.0	23.0	26.0	25.0	27.0	29.0	25.0
25	20.0	22.0	19.0	18.0	12.0	21.0	24.0	27.0	27.0	28.0	28.0	25.0
26	21.0	20.0	18.0	18.0	13.0	---	24.0	28.0	28.0	28.0	28.0	26.0
27	21.0	22.0	22.0	19.0	15.0	22.0	24.0	28.0	29.0	28.0	28.0	27.0
28	23.0	19.0	21.0	19.0	17.0	23.0	24.0	27.0	27.5	---	29.0	27.0
29	22.0	19.0	20.0	---	---	23.0	25.0	28.0	27.0	29.0	28.0	27.0
30	---	19.0	20.0	20.0	---	23.0	---	28.0	27.0	28.0	28.0	26.0
31	22.0	---	21.0	20.0	---	22.0	---	29.0	---	28.0	28.0	---

WITHLACOOCHEE RIVER BASIN

02311500 WITHLACOOCHEE RIVER NEAR DADE CITY, FL--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	OXYGEN, DIS-SOLVED (MG/L) (00300)	NITRO-GEN, NITRITE TOTAL (MG/L AS N) (00615)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS-PHOROUS TOTAL (MG/L AS P) (00665)	PHOS-PHORUS, ORTHO, TOTAL (MG/L AS P) (70507)
OCT 04...	1100	287	97	6.5	25.0	3.4	0.020	0.020	0.010	1.6	0.200	0.170
NOV 22...	0920	29	--	6.8	21.0	2.3	0.010	0.020	0.030	0.95	0.070	0.060
JAN 24...	0835	430	131	7.6	--	3.4	0.010	0.120	<0.010	0.89	0.040	0.030
MAR 21...	0910	51	209	6.8	20.5	3.3	0.010	0.030	<0.010	0.79	0.040	0.030
MAY 09...	0915	20	320	7.5	22.0	5.5	<0.010	0.040	0.010	0.43	0.030	0.030
JUL 06...	1020	33	291	7.5	26.0	2.8	<0.010	0.020	0.030	0.64	0.300	0.280
AUG 29...	1120	104	178	7.0	28.5	2.6	<0.010	<0.020	0.020	1.1	0.040	0.020

DATE	COLOR (PLAT-INUM-COBALT UNITS) (00080)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY LAB (MG/L AS CACO3) (90410)
OCT 04...	400	40	13	1.8	4.5	2.0	25
MAY 09...	50	140	51	4.2	10	0.70	138
AUG 29...	240	74	25	2.7	7.2	1.6	67

DATE	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	STRON-TIUM, DIS-SOLVED (UG/L AS SR) (01080)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
OCT 04...	1.2	9.9	0.40	5.6	151	70	--
MAY 09...	1.8	13	0.50	3.9	185	200	8.0
AUG 29...	2.1	12	0.40	6.6	153	130	22

WITHLACOOCHEE RIVER BASIN

02311700 DADE CITY CANAL NEAR DADE CITY, FL

LOCATION.--Lat 28°22'55", long 82°10'48", in SW¼ Sec.23, T.24 S., R.21 E., Pasco County, Hydrologic Unit 03100208, near center of span, on downstream side of bridge over Evans Canal immediately upstream from confluence with Pasco Packing Company Canal, 1.0 mi downstream from Pasco Packing Plant at Dade City, and 4.0 mi upstream from Withlacoochee River.

DISCHARGE AREA.--35 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--February 1957 to October 1962 (discharge measurements for Pasco Packing Company and Evans Canals only). November 1962 to current year (discharge measurements only). Prior to October 1985, published with station 02312000 Withlacoochee River at Trilby.

GAGE.--Nonrecording gage. Datum of gage not determined. Prior to Aug. 16, 1961, nonrecording gage 150 ft upstream at different datum.

REMARKS.--Discharge measurements made either downstream from or at bridge over Dade City Canal, 30 ft downstream from confluence of Pasco Packing Company and Evans Canals. Water is diverted from ground-water sources through canals to the Withlacoochee River.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge measured, 103 ft^3/s, Feb. 24, 1967; no flow observed Dec. 2, 1964, Aug. 24, 1965.

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1966 to current year. Published with station 02312000 Withlacoochee River at Trilby, water years 1983-85.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	GAGE HEIGHT (FEET) (00065)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	OXYGEN, DIS-SOLVED (MG/L) (00300)
OCT							
04...	1230	17	69.14	--	--	--	--
NOV							
21...	1140	20	67.59	--	--	--	--
JAN							
24...	1155	40	69.59	313	7.1	25.0	2.9
MAR							
21...	1105	30	69.03	370	7.6	26.0	5.4
MAY							
09...	1130	26	68.84	365	8.2	28.0	5.8
JUL							
06...	1205	9.6	68.15	351	8.1	28.0	8.7
AUG							
29...	1345	12	68.38	--	7.6	27.0	6.8

WITHLACOOCHEE RIVER BASIN

02312000 WITHLACOOCHEE RIVER AT TRILBY, FL

LOCATION.--Lat 28°28'47", long 82°10'40", in SE¼ sec.14, T.23 S., R.21 E., Hernando County, Hydrologic Unit 03100208, on right bank at downstream side of bridge on U.S. Highway 301, 1.6 mi northeast of Trilby, 10 mi upstream from Little Withlacoochee River, and 93 mi upstream from mouth.

DRAINAGE AREA.--570 mi^2, approximately.

PERIOD OF RECORD.--August 1928 to February 1929, February 1930 to current year.

REVISED RECORDS.--WDR FL-72-3: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 49.27 ft above National Geodetic Vertical Datum of 1929 (U.S. Army Corps of Engineers bench mark). Prior to Oct. 1, 1938, nonrecording gage at site 1.5 mi downstream at datum 0.12 ft lower.

REMARKS.--Records good. High-water diversion above station into Hillsborough River basin through Withlacoochee-Hillsborough Overflow near Richland (station 02311000). Records include water diverted from ground-water supplies through Dade City Canal (station 02311700) by citrus processing plants, in SW¼ sec.23, T.24 S., R.21 E., 5 mi upstream from Withlacoochee River.

AVERAGE DISCHARGE.--59 years (water years 1931-89), 348 ft^3/s, 252,100 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,840 ft^3/s June 21, 1934, gage height, 20.5 ft, site and datum then in use; minimum daily discharge, 6.2 ft^3/s, June 6, 1985; minimum gage height observed, 0.54 ft, June 27, 1977, June 5,6,7,9,12, 1985.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,330 ft^3/s, Dec. 5, gage height, 10.91 ft; minimum discharge, 30 ft^3/s, June 28,29; gage height, 1.03 ft, June 13,29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	999	101	1150	436	661	185	78	63	40	58	95	111
2	899	96	1230	415	678	198	74	53	41	62	86	125
3	819	92	1290	395	688	212	62	56	41	60	80	143
4	751	96	1320	376	690	219	58	62	41	54	75	156
5	688	100	1320	356	682	220	89	66	39	49	67	165
6	633	100	1300	340	665	214	119	67	37	47	62	168
7	584	96	1270	325	641	205	121	68	42	45	63	163
8	540	92	1220	311	612	200	113	62	45	43	75	155
9	505	90	1160	298	581	198	108	53	44	44	104	147
10	474	90	1090	285	548	193	96	54	43	49	134	140
11	444	89	1030	273	517	188	85	59	42	56	153	133
12	416	88	1000	263	486	183	84	59	37	63	174	127
13	390	87	977	253	453	171	83	57	33	69	191	121
14	364	85	938	243	423	158	82	55	35	81	198	113
15	340	84	888	234	396	153	89	53	37	83	203	105
16	317	83	843	224	371	152	108	46	35	79	206	99
17	296	83	804	210	349	150	102	48	38	80	204	93
18	275	83	767	201	329	146	90	51	39	89	197	88
19	258	82	732	196	311	139	87	53	35	84	188	87
20	241	78	700	194	292	126	87	56	34	74	185	90
21	225	75	673	225	271	115	84	55	35	63	175	90
22	208	81	654	370	262	114	81	50	36	57	160	89
23	191	296	636	479	256	117	76	42	36	64	141	95
24	176	441	617	512	248	118	67	43	39	80	122	95
25	162	555	595	516	237	113	59	47	38	92	102	92
26	149	645	567	524	225	106	60	49	35	96	86	95
27	137	735	539	540	210	91	62	49	32	100	80	98
28	127	836	516	562	194	81	62	48	31	103	85	103
29	119	939	498	590	---	81	62	42	30	103	98	104
30	112	1040	478	618	---	82	67	35	41	101	104	102
31	105	---	458	642	---	82	---	38	---	99	105	---
TOTAL	11944	7438	27260	11406	12276	4710	2495	1639	1131	2227	3998	3492
MEAN	385	248	879	368	438	152	83.2	52.9	37.7	71.8	129	116
MAX	999	1040	1320	642	690	220	121	68	45	103	206	168
MIN	105	75	458	194	194	81	58	35	30	43	62	87
AC-FT	23690	14750	54070	22620	24350	9340	4950	3250	2240	4420	7930	6930

CAL YR 1988 TOTAL 146354 MEAN 400 MAX 2660 MIN 25 AC-FT 290300
WTR YR 1989 TOTAL 90016 MEAN 247 MAX 1320 MIN 30 AC-FT 178500

02312000 WITHLACOOCHEE RIVER AT TRILBY, FL--(Continued)

GAGE HEIGHT, IN FEET ABOVE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.58	2.32	10.22	6.02	7.74	3.44	1.97	1.55	1.19	1.61	2.23	2.61
2	9.09	2.26	10.55	5.83	7.84	3.60	1.90	1.38	1.21	1.69	2.10	2.77
3	8.65	2.19	10.76	5.65	7.90	3.77	1.70	1.42	1.21	1.65	2.01	2.97
4	8.26	2.25	10.88	5.46	7.91	3.85	1.62	1.53	1.21	1.55	1.91	3.10
5	7.90	2.32	10.89	5.28	7.87	3.86	2.07	1.60	1.17	1.46	1.78	3.17
6	7.56	2.32	10.82	5.12	7.77	3.80	2.46	1.62	1.13	1.41	1.70	3.18
7	7.23	2.26	10.69	4.97	7.60	3.69	2.45	1.64	1.23	1.39	1.71	3.12
8	6.92	2.19	10.50	4.83	7.41	3.63	2.35	1.54	1.31	1.34	1.92	3.01
9	6.63	2.17	10.25	4.70	7.21	3.60	2.27	1.37	1.28	1.37	2.36	2.91
10	6.35	2.16	9.96	4.57	6.98	3.55	2.09	1.39	1.26	1.46	2.79	2.82
11	6.09	2.14	9.72	4.44	6.72	3.49	1.92	1.49	1.25	1.59	3.05	2.73
12	5.84	2.13	9.62	4.33	6.46	3.42	1.90	1.49	1.15	1.71	3.31	2.64
13	5.60	2.11	9.49	4.22	6.17	3.28	1.89	1.46	1.06	1.82	3.52	2.55
14	5.35	2.09	9.29	4.12	5.90	3.11	1.88	1.44	1.11	2.02	3.61	2.45
15	5.12	2.07	9.04	4.02	5.65	3.05	1.98	1.39	1.16	2.05	3.66	2.33
16	4.89	2.05	8.79	3.91	5.42	3.04	2.27	1.25	1.11	1.98	3.70	2.23
17	4.68	2.04	8.57	3.74	5.21	3.02	2.18	1.29	1.18	1.99	3.69	2.15
18	4.46	2.04	8.36	3.63	5.01	2.96	2.00	1.36	1.21	2.14	3.63	2.07
19	4.28	2.03	8.15	3.59	4.83	2.87	1.95	1.40	1.13	2.07	3.55	2.05
20	4.09	1.96	7.97	3.56	4.64	2.69	1.95	1.45	1.11	1.90	3.54	2.09
21	3.91	1.91	7.82	3.91	4.42	2.53	1.90	1.45	1.12	1.71	3.45	2.10
22	3.73	2.02	7.69	5.40	4.33	2.52	1.85	1.36	1.15	1.61	3.28	2.09
23	3.52	4.66	7.57	6.39	4.26	2.56	1.78	1.20	1.17	1.73	3.07	2.17
24	3.34	6.06	7.45	6.68	4.17	2.58	1.63	1.22	1.23	2.01	2.83	2.18
25	3.17	7.02	7.30	6.71	4.05	2.51	1.49	1.30	1.21	2.19	2.57	2.13
26	2.99	7.63	7.11	6.78	3.91	2.40	1.50	1.34	1.15	2.26	2.34	2.17
27	2.84	8.17	6.91	6.92	3.74	2.17	1.53	1.35	1.09	2.31	2.27	2.23
28	2.71	8.75	6.72	7.08	3.55	2.02	1.53	1.33	1.06	2.35	2.38	2.29
29	2.59	9.30	6.56	7.27	---	2.02	1.53	1.21	1.05	2.36	2.54	2.32
30	2.49	9.79	6.39	7.45	---	2.04	1.62	1.08	1.28	2.33	2.60	2.28
31	2.39	---	6.21	7.61	---	2.03	---	1.13	---	2.30	2.56	---
MEAN	5.23	3.61	8.78	5.30	5.88	3.00	1.91	1.39	1.17	1.85	2.76	2.50
MAX	9.58	9.79	10.89	7.61	7.91	3.86	2.46	1.64	1.31	2.36	3.70	3.18
MIN	2.39	1.91	6.21	3.56	3.55	2.02	1.49	1.08	1.05	1.34	1.70	2.05

CAL YR 1988 MEAN 4.73 MAX 14.36 MIN 1.12
WTR YR 1989 MEAN 3.61 MAX 10.89 MIN 1.05

WITHLACOOCHEE RIVER BASIN

02312140 BAYROOT SLOUGH HEADWATERS NEAR BAY LAKE, FL

LOCATION.--Lat 28°27'23", long 81°55'14", in NW¼ sec.28, T.23 S., R.24 E., Lake County, Hydrologic Unit 03100208, at bridge on State Highway 565, 0.1 mi upstream from Seaboard Coast Line Railroad bridge, and 1.5 mi southwest of town of Bay Lake.

DRAINAGE AREA.--18 mi^2, approximately.

PERIOD OF RECORD.--1960-61, October 1963 to current year (discharge measurements only).

REVISED RECORDS.--WDR FL-72-3: Drainage area.

REMARKS.--Discharge measurements made along railroad fill from 1.0 mi north to 0.8 mi south of State Highway 565, which includes Bayroot Slough, Bayroot Drain and Cam Slough.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge measured, 202 ft^3/s, Sept. 14, 1960; no flow observed at times most years.

DISCHARGE MEASUREMENTS, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND
OCT			MAY		
11...	0800	12.5	11...	1110	.00
NOV			JUL		
29...	1205	71.2	10...	1130	.00
JAN			AUG		
26...	1425	61.9	24...	1210	1.94
MAR					
23...	1140	.00			

WITHLACOOCHEE RIVER BASIN

02312180 LITTLE WITHLACOOCHEE RIVER NEAR TARRYTOWN, FL

LOCATION.--Lat 28°31'17", long 82°03'18", in NE¼ sec.1, T.23 S., R.22 E., Sumter County, Hydrologic Unit 03100208, near center of span on downstream side of bridge on State Highway 471, 2.3 mi south of Tarrytown, 3.1 mi southwest of Linden, and 14 mi upstream from mouth.

DRAINAGE AREA.--85 mi^2, approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1966 to current year.

REVISED RECORDS.--WDR FL-72-3: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 80.00 ft above National Geodetic Vertical Datum of 1929 (Florida Department of Transportation bench mark).

REMARKS.--Records fair. Above bankfull stage, discharge measurements are made along State Highway 471 and include all flow from 2.3 mi north to 2.8 mi south of gaging station.

AVERAGE DISCHARGE.--23 years, 43.2 ft^3/s, 6.90 in/yr, 31,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,210 ft^3/s, Mar. 31, 1987, gage height, 6.51 ft; maximum gage height, 6.58 ft, Sept. 28, 1979; no flow for many days most years; river dry at gage for many days in 1967, 1968, 1971, 1977, 1985.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 274 ft^3/s, Jan. 27, gage height, 5.24 ft; no flow for many days; minimum gage height, 1.80 ft, June 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	113	3.5	223	85	238	36	4.3	6.7	.00	.08	.18	.07
2	104	3.1	223	81	227	41	3.6	5.9	.00	.06	.69	.45
3	98	2.8	222	76	216	46	3.0	4.6	.00	.02	.24	.44
4	93	3.2	221	71	205	46	3.0	3.5	.00	.00	.10	.39
5	84	3.2	216	65	183	44	6.9	2.7	.00	.00	.06	.20
6	76	3.1	210	61	158	42	6.3	1.9	.00	.02	.00	.23
7	70	2.7	204	58	137	40	5.4	1.3	.00	.08	.00	.35
8	65	2.5	186	54	124	38	4.7	.78	.00	.03	.00	.12
9	59	2.3	167	52	116	36	4.0	.38	.00	.00	.03	.06
10	55	2.1	146	49	106	34	3.4	.17	.00	.00	.21	.02
11	51	2.0	169	46	97	32	2.9	.49	.00	.00	.17	.00
12	47	1.9	249	44	91	30	2.7	.27	.00	.00	.66	.00
13	43	1.8	252	42	84	28	2.3	.03	.00	.00	2.3	.00
14	38	1.8	247	39	79	26	2.3	.00	.00	.00	3.6	.00
15	35	1.6	242	37	74	24	6.2	.00	.00	.00	2.2	.00
16	31	1.5	239	36	69	22	11	.00	.00	.00	1.2	.00
17	28	1.4	236	33	62	20	13	.00	.00	.04	.60	.00
18	25	1.3	222	31	58	18	14	.00	.00	.12	.26	.00
19	23	1.1	211	29	54	16	18	.00	.00	.32	.14	.00
20	20	.91	201	28	50	14	17	.00	.00	.43	.26	.00
21	17	.84	182	61	48	12	15	.00	.00	.22	.36	.00
22	14	2.4	162	203	54	10	13	.00	.00	.30	.16	.00
23	12	55	143	240	50	9.9	10	.00	.00	3.3	.07	.00
24	9.7	78	127	251	46	9.6	8.6	.00	.00	4.4	.02	.00
25	8.5	108	121	264	44	8.8	7.2	.00	.00	4.2	.00	.10
26	7.3	142	116	270	42	8.0	6.0	.00	.00	2.2	.00	.25
27	6.4	172	109	271	40	7.3	4.9	.00	.00	1.1	.01	.10
28	5.6	197	104	268	38	6.3	3.8	.00	.00	.76	.26	.06
29	5.0	207	99	262	---	5.5	3.1	.00	.07	.26	.15	.02
30	4.4	216	95	256	---	4.9	3.6	.00	.12	.10	.06	.00
31	3.9	---	90	247	---	4.9	---	.00	---	.04	.00	---
TOTAL	1251.8	1222.05	5634	3610	2790	720.2	207.2	28.72	0.19	18.08	13.99	2.86
MEAN	40.4	40.7	182	116	99.6	23.2	6.91	.93	.006	.58	.45	.095
MAX	113	216	252	271	238	46	17	6.7	.12	4.4	3.6	.45
MIN	3.9	.84	90	28	38	4.9	2.3	.00	.00	.00	.00	.00
AC-FT	2480	2420	11180	7160	5530	1430	411	57	.4	36	28	5.7
CFSM	.48	.48	2.14	1.37	1.17	.27	.08	.01	.00	.01	.01	.00
IN.	.55	.53	2.47	1.58	1.22	.32	.09	.01	.00	.01	.01	.00

CAL YR 1988 TOTAL 25454.07 MEAN 69.5 MAX 519 MIN .00 AC-FT 50490 CFSM .82 IN. 11.14
WTR YR 1989 TOTAL 15499.09 MEAN 42.5 MAX 271 MIN .00 AC-FT 30740 CFSM .50 IN. 6.78

02312180 LITTLE WITHLACOOCHEE RIVER NEAR TARRYTOWN, FL--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1969-71, 1973, 1984, 1986 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	NITRO- GEN, NITRITE TOTAL (MG/L AS N) (00615)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS- PHOROUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P) (70507)
NOV												
28...	1455	201	--	--	21.0	2.9	0.010	<0.020	0.010	1.2	0.030	0.020
JAN												
26...	0855	414	57	6.8	15.5	5.3	0.010	0.120	<0.010	0.95	0.020	0.020
MAR												
22...	1250	10	62	5.2	22.0	5.0	0.010	0.040	0.010	1.3	0.030	0.030

02312194 BIG GANT CANAL AT STRUCTURE S-11, NEAR WEBSTER, FL

LOCATION.--Lat 28°34'47", long 82°05'45", in NW¼ sec.15, T.22 S., R.22 E., Sumter County, Hydrologic Unit 03100208, on left bank 10 ft downstream from bridge on State Highway 478A, 400 ft upstream from structure S-11, 0.5 mi downstream from Big Gant Lake, 3.2 mi southwest of Webster, and 3.4 mi upstream from mouth.

DRAINAGE AREA.--18 mi^2, approximately.

PERIOD OF RECORDS--June 1970 to September 1984 (discharge measurements and thrice-weekly gage heights only), incomplete, October 1984 to current year (discharge measurements only).

REVISED RECORDS.--WDR FL-72-3: Drainage area.

GAGE.--Nonrecording gage. Datum of gage is National Geodetic Vertical Datum of 1929 (Florida Department of Transportation bench mark).

REMARKS.--Elevation of Big Gant Lake and flow at station regulated by manipulation of stoplogs in structure S-11; crest of weir is at elevation 72.6 ft with all stoplogs out and 75.8 ft with all stoplogs in place.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge measured, 42 ft^3/s, Mar. 8, 1983; maximum gage height observed, 76.80 ft, Sept. 26, 1982; no flow observed at times most years; minimum gage height observed, 69.13 ft, May 29, 1981.

DISCHARGE MEASUREMENTS, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	GAGE HEIGHT (FEET)	DIS-CHARGE, INST. CUBIC FEET PER SECOND
OCT			
05...	1435	75.61	16.6
NOV			
28...	1320	75.90	.00
JAN			
25...	1425	76.17	21.5
MAR			
22...	1135	75.93	.00
MAY			
10...	1150	75.90	.00

WITHLACOOCHEE RIVER BASIN

02312197 BIG GANT CANAL AT STRUCTURE WC-2, AT RERDELL, FL

LOCATION.--Lat 28°34'16", long 82°08'52", in SW¼ sec.18, T.22 S., R.22 E., Sumter County, Hydrologic Unit 03100208, on left bank 75 ft upstream from structure WC-2, 0.1 mi upstream from mouth, and 0.5 mi east of Rerdell.

DRAINAGE AREA.--30 mi^2, approximately.

PERIOD OF RECORD.--June 1970 to September 1984 (discharge measurements and thrice-weekly gage heights only), incomplete, October 1984 to current year (discharge measurements only).

GAGE.--Nonrecording gage. Datum of gage is National Geodetic Vertical Datum of 1929 (U.S. Soil Conservation Service bench mark). Auxiliary gage at downstream side of structure.

REMARKS.--Flow at station regulated by manipulation of gates in spillway; flow over closed gates occurs at elevation 65.55 ft.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge measured, 83 ft^3/s, July 8, 1974, gage height, 67.46 ft; maximum gage height observed, 70.00 ft, Sept. 30, 1979; no flow observed at times in 1981; minimum gage height observed, 64.48 ft, May 30, 1985.

DISCHARGE MEASUREMENTS, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	GAGE HEIGHT (FEET)	DIS-CHARGE, INST. CUBIC FEET PER SECOND
OCT 05...	1130	65.83	24.3
NOV 28...	1210	65.79	15.5
JAN 25...	1150	66.34	51.4
MAR 22...	1030	65.70	7.39
MAY 10...	1015	65.63	2.80
JUL 07...	0940	65.76	18.6
AUG 30...	1020	65.85	34.0

02312198 BIG GANT CANAL BELOW STRUCTURE WC-2, AT RERDELL, FL

LOCATION.--Lat 28°34'16", long 82°08'54", in SW¼ sec.18, T.22 S., R.22 E., Sumter County, Hydrologic Unit 03100208, on left bank 75 ft downstream from structure WC-2, 0.1 mi upstream from mouth, and 0.5 mi east of Rerdell.

DRAINAGE AREA.--30 mi^2, approximately.

PERIOD OF RECORD.--June 1970 to September 1984 (thrice-weekly gage heights only), incomplete, October 1984 to current year (periodic gage heights only).

GAGE.--Nonrecording gage. Datum of gage is National Geodetic Vertical Datum of 1929 (U.S. Soil Conservation Service bench mark).

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height observed, 70.00 ft, Sept. 30, 1979; minimum observed, 61.05 ft, May 30, 1985.

GAGE HEIGHT, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	GAGE HEIGHT (FEET ABOVE DATUM)	DATE	TIME	GAGE HEIGHT (FEET ABOVE DATUM)
OCT 05...	1105	65.51	MAY 10...	1015	63.50
NOV 28...	1150	65.24	JUL 07...	0925	63.73
JAN 25...	1130	66.34	AUG 30...	1010	63.90
MAR 22...	1005	63.82			

WITHLACOOCHEE RIVER BASIN

02312200 LITTLE WITHLACOOCHEE RIVER AT RERDELL, FL

LOCATION.--Lat 28°34'21", long 82°09'20", in SE¼ sec.13, T.22 S., R.21 E., Hernando County, Hydrologic Unit 03100208, near center of span on downstream side of bridge on U.S. Highway 301, 0.2 mi north of Rerdell, and 4.8 mi upstream from mouth.

DRAINAGE AREA.--145 mi^2, approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1958 to current year.

REVISED RECORDS.--WDR FL-72-3: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 59.02 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair. Above bankfull stage, discharge measurements are made along U.S. Highway 301 and include all flow from 3.4 mi north to 1.8 mi south of gaging station.

AVERAGE DISCHARGE.--31 years, 81.9 ft^3/s, 7.67 in/yr, 59,330 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,400 ft^3/s, Mar. 19, 1960, gage height, 12.32 ft; no flow for many days in 1961, 1962, 1977, 1981, 1985; river dry at gage for many days in 1981.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 283 ft^3/s, Jan. 24, gage height, 5.29 ft; minimum, 3.0 ft^3/s, part of each day June 18-20, gage height, 1.42 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	203	24	146	102	225	48	21	25	4.4	32	29	17
2	187	23	149	97	211	53	19	26	3.8	28	27	20
3	174	22	152	92	197	58	16	24	3.7	25	24	23
4	168	23	153	88	183	59	14	20	3.7	22	22	22
5	161	22	153	82	171	57	17	17	3.9	20	20	19
6	150	22	152	78	160	56	16	15	4.6	19	19	19
7	138	20	151	74	151	54	15	13	4.5	20	17	18
8	127	19	147	70	142	52	14	12	4.7	18	16	16
9	118	18	144	67	131	49	13	10	4.4	16	21	16
10	111	17	139	64	121	46	12	10	4.0	14	29	15
11	105	17	143	61	112	44	12	15	3.8	13	26	14
12	99	16	168	58	104	41	12	13	3.7	12	26	14
13	93	16	187	55	96	39	11	11	3.5	11	32	12
14	88	15	195	53	91	37	12	9.6	3.4	10	31	12
15	82	15	194	50	86	35	18	8.4	3.3	9.6	28	11
16	77	15	192	48	82	33	23	7.7	3.9	9.6	25	11
17	72	14	189	45	77	33	23	6.9	3.5	9.8	23	12
18	67	14	185	42	72	33	24	6.3	3.2	12	21	11
19	63	13	180	40	68	32	23	5.8	3.3	13	25	10
20	59	13	173	38	64	30	22	5.4	4.8	13	35	9.4
21	56	13	165	54	61	28	19	5.9	9.5	11	38	8.3
22	52	24	158	144	67	27	21	7.0	14	11	33	8.0
23	48	89	151	236	63	29	20	6.7	13	16	28	11
24	44	67	145	279	58	29	18	6.2	17	16	25	12
25	41	76	139	280	55	27	18	5.7	27	16	23	15
26	37	93	132	273	53	24	16	5.3	22	14	22	16
27	35	104	126	268	50	22	14	4.9	19	14	19	17
28	32	119	121	263	49	20	12	5.5	18	43	19	16
29	29	132	116	255	---	18	13	5.9	25	34	18	15
30	27	141	112	246	---	17	19	5.2	40	26	19	14
31	25	---	107	236	---	20	---	4.9	---	23	17	---
TOTAL	2768	1216	4764	3838	3000	1150	507	324.3	282.6	551.0	757	433.7
MEAN	89.3	40.5	154	124	107	37.1	16.9	10.5	9.42	17.8	24.4	14.5
MAX	203	141	195	280	225	59	24	26	40	43	38	23
MIN	25	13	107	38	49	17	11	4.9	3.2	9.6	16	8.0
AC-FT	5490	2410	9450	7610	5950	2280	1010	643	561	1090	1500	860
CFSM	.62	.28	1.06	.85	.74	.26	.12	.07	.06	.12	.17	.10
IN.	.71	.31	1.22	.98	.77	.30	.13	.08	.07	.14	.19	.11

CAL YR 1988 TOTAL 31540.38 MEAN 86.2 MAX 693 MIN .48 AC-FT 62560 CFSM .59 IN. 8.09
WTR YR 1989 TOTAL 19591.6 MEAN 53.7 MAX 280 MIN 3.2 AC-FT 38860 CFSM .37 IN. 5.03

02312200 LITTLE WITHLACOOCHEE RIVER AT RERDELL, FL--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1958 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1964 to December 1967.
WATER TEMPERATURE: October 1964 to December 1967.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum observed, 490 microsiemens, Dec. 26, 1967; minimum observed, 45 microsiemens Aug. 30, 1965.
WATER TEMPERATURE: Maximum observed, 30.5°C, June 30, 1965; minimum observed, 9.0°C, Jan. 30,31, 1966.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	COLOR (PLAT-INUM-COBALT UNITS) (00080)	OXYGEN, DIS-SOLVED (MG/L) (00300)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)
OCT									
05...	0950	166	102	6.9	23.0	440	3.3	50	18
NOV									
28...	0910	114	110	6.7	20.0	240	2.8	50	18
JAN									
25...	0835	279	91	5.8	14.5	200	52.0	45	16
MAR									
22...	0750	26	153	7.4	21.0	200	3.6	68	25
MAY									
10...	0825	9.0	223	7.5	23.0	70	5.2	100	38
JUL									
07...	0735	19	324	7.4	26.5	30	2.3	140	54
AUG									
30...	0815	16	331	7.5	26.0	40	1.1	160	59

DATE	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)
OCT									
05...	1.2	3.4	0.70	34	1.2	7.6	0.40	3.6	151
NOV									
28...	1.2	3.8	0.80	40	1.8	10	0.40	3.1	131
JAN									
25...	1.1	4.1	0.50	28	2.0	8.8	0.20	1.5	113
MAR									
22...	1.4	4.9	0.20	53	1.3	13	0.20	1.7	157
MAY									
10...	1.9	5.7	0.30	94	1.7	10	0.30	4.9	140
JUL									
07...	2.0	5.2	1.8	148	1.2	11	0.10	39	189
AUG									
30...	2.2	6.3	2.1	152	0.80	12	0.10	8.6	195

DATE	NITRO-GEN, NITRITE TOTAL (MG/L AS N) (00615)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS-PHOROUS TOTAL (MG/L AS P) (00665)	PHOS-PHORUS, ORTHO, TOTAL (MG/L AS P) (70507)	STRON-TIUM, DIS-SOLVED (UG/L AS SR) (01080)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
OCT								
05...	0.020	0.030	0.010	1.4	0.060	0.040	50	--
NOV								
28...	0.010	<0.020	0.040	1.2	0.060	0.030	110	--
JAN								
25...	0.010	0.050	<0.010	1.0	0.110	0.020	60	--
MAR								
22...	0.010	0.070	0.030	0.99	0.040	0.030	70	--
MAY								
10...	<0.010	2.20	0.040	0.84	0.050	0.050	110	10
JUL								
07...	<0.010	0.360	0.090	0.69	0.050	0.030	130	--
AUG								
30...	<0.010	0.020	0.240	0.88	0.100	0.060	110	6.4

WITHLACOOCHEE RIVER BASIN

02312500 WITHLACOOCHEE RIVER AT CROOM, FL

LOCATION.--Lat 28°35'33", long 82°13'20", in NE¼ sec.8, T.22 S., R.21 E., Hernando County, Hydrologic Unit 03100208, on left bank at upstream side of abandoned highway bridge, 0.4 mi northwest of Croom, 2.3 mi downstream from Little Withlacoochee River, 4.5 mi southeast of Nobleton, and 77 mi upstream from mouth.

DRAINAGE AREA.--810 mi^2, approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1939 to current year. Monthly discharge only for some periods, published in WSP 1304.

REVISED RECORDS.--WDR FL-72-3: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 38.94 ft above National Geodetic Vertical Datum of 1929 (U.S. Army Corps of Engineers bench mark). Prior to Feb. 2, 1940, nonrecording gage at railroad bridge 500 ft upstream at same datum.

REMARKS.--Estimated daily discharges: Jan. 23 to Mar. 14. Records good except for estimated daily discharges, which are fair. Records include water diverted from ground-water supplies (see station 02311700). High-water diversion in headwaters (station 02311000).

AVERAGE DISCHARGE.--50 years, 455 ft^3/s, 329,650 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,650 ft^3/s, Mar. 23, 1960, gage height, 13.78 ft; minimum, 4.4 ft^3/s, July 7,8, 1981, gage height, 1.06 ft.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in June 1934 reached a stage of 15.2 ft, from floodmark, discharge not determined.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,430 ft^3/s, Oct. 1, stage falling, peak occurred Sept. 18, 1988; maximum peak discharge 1,380 ft^3/s, Dec. 5,6,7, maximum gage height, 8.08 ft, Oct. 1; minimum discharge, 55 ft^3/s, June 15, gage height, 1.95 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1370	264	1160	662	785	362	183	133	61	100	170	162
2	1250	254	1240	638	800	372	176	131	63	111	165	172
3	1150	244	1300	614	805	395	167	123	63	115	165	174
4	1060	245	1340	590	790	402	156	119	65	113	167	180
5	981	245	1370	566	785	398	154	117	66	108	153	186
6	920	245	1380	543	770	389	168	117	70	101	142	189
7	870	240	1380	522	745	379	184	115	70	97	134	191
8	827	234	1370	502	715	370	187	113	73	94	128	191
9	789	227	1340	484	690	358	184	106	72	90	138	188
10	751	221	1300	466	670	343	177	99	68	88	167	187
11	716	216	1270	449	645	338	166	106	67	88	187	184
12	683	214	1260	434	615	328	156	105	67	93	207	180
13	654	211	1230	418	590	320	152	102	63	99	234	175
14	625	207	1200	403	570	315	152	99	59	103	245	167
15	596	203	1160	389	550	303	170	95	56	110	252	160
16	570	201	1110	376	530	294	184	90	58	116	256	153
17	545	198	1060	362	510	287	190	83	63	114	259	145
18	520	195	1020	346	490	283	185	79	61	113	264	139
19	496	193	981	332	475	277	176	78	61	122	274	133
20	474	190	945	321	460	270	169	79	63	126	282	129
21	453	186	914	337	445	256	165	82	71	123	287	126
22	432	192	887	425	425	242	159	80	70	127	280	123
23	410	321	867	560	410	239	154	76	72	124	258	127
24	390	452	848	595	395	242	147	70	75	126	235	138
25	370	562	827	615	385	239	137	68	79	130	211	152
26	350	679	806	625	387	231	128	69	82	135	189	147
27	331	780	781	635	373	219	123	71	78	138	174	143
28	315	869	754	650	369	203	119	72	74	184	160	141
29	299	961	730	685	---	189	117	73	78	182	154	142
30	284	1060	708	730	---	182	120	70	88	176	153	141
31	272	---	686	758	---	185	---	64	---	174	155	---
TOTAL	19753	10509	33224	16032	16179	9210	4805	2884	2056	3720	6245	4765
MEAN	637	350	1072	517	578	297	160	93.0	68.5	120	201	159
MAX	1370	1060	1380	758	805	402	190	133	88	184	287	191
MIN	272	186	686	321	369	182	117	64	56	88	128	123
AC-FT	39180	20840	65900	31800	32090	18270	9530	5720	4080	7380	12390	9450

CAL YR 1988 TOTAL 184108 MEAN 503 MAX 2730 MIN 36 AC-FT 365200
WTR YR 1989 TOTAL 129382 MEAN 354 MAX 1380 MIN 56 AC-FT 256600

WITHLACOOCHEE RIVER BASIN

02312500 WITHLACOOCHEE RIVER AT CROOM, FL--Continued

GAGE HEIGHT, IN FEET ABOVE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.98	3.84	7.48	6.14	---	---	3.26	2.83	2.04	2.45	3.28	3.74
2	7.77	3.77	7.62	6.04	---	---	3.21	2.81	2.06	2.56	3.25	3.83
3	7.60	3.70	7.73	5.94	---	---	3.13	2.74	2.07	2.61	3.25	3.83
4	7.43	3.71	7.80	5.84	---	---	3.03	2.69	2.09	2.59	3.27	3.88
5	7.24	3.70	7.84	5.73	---	---	3.02	2.68	2.11	2.53	3.16	3.92
6	7.07	3.70	7.87	5.62	---	---	3.14	2.68	2.14	2.47	3.07	3.94
7	6.91	3.66	7.87	5.52	---	---	3.27	2.66	2.14	2.44	3.00	3.95
8	6.75	3.61	7.85	5.43	---	---	3.30	2.63	2.18	2.41	2.95	3.94
9	6.59	3.56	7.81	5.34	---	---	3.27	2.57	2.16	2.38	3.04	3.92
10	6.44	3.51	7.75	5.26	---	---	3.22	2.49	2.11	2.36	3.31	3.90
11	6.30	3.48	7.71	5.17	---	---	3.13	2.56	2.11	2.37	3.48	3.87
12	6.16	3.46	7.69	5.10	---	---	3.04	2.55	2.11	2.43	3.65	3.83
13	6.02	3.43	7.65	5.02	---	---	3.00	2.52	2.05	2.49	3.86	3.78
14	5.90	3.40	7.60	4.94	---	---	3.00	2.49	2.00	2.54	3.95	3.71
15	5.77	3.37	7.54	4.86	---	4.17	3.16	2.45	1.97	2.62	4.01	3.64
16	5.64	3.34	7.46	4.79	---	4.10	3.28	2.39	1.99	2.68	4.05	3.57
17	5.51	3.32	7.38	4.72	---	4.06	3.32	2.31	2.05	2.68	4.07	3.50
18	5.39	3.29	7.29	4.62	---	4.02	3.28	2.27	2.02	2.67	4.11	3.44
19	5.26	3.28	7.21	4.54	---	3.97	3.21	2.26	2.02	2.76	4.19	3.38
20	5.14	3.25	7.12	4.48	---	3.92	3.15	2.27	2.04	2.81	4.24	3.33
21	5.03	3.21	7.03	4.59	---	3.82	3.11	2.30	2.15	2.78	4.28	3.29
22	4.91	3.26	6.96	5.12	---	3.72	3.06	2.28	2.13	2.83	4.27	3.26
23	4.79	4.17	6.89	---	---	3.69	3.02	2.24	2.16	2.81	4.19	3.30
24	4.66	4.94	6.83	---	---	3.72	2.96	2.17	2.19	2.84	4.08	3.39
25	4.54	5.50	6.76	---	---	3.69	2.87	2.14	2.24	2.88	3.97	3.51
26	4.42	6.03	6.68	---	---	3.64	2.78	2.14	2.28	2.93	3.87	3.46
27	4.31	6.44	6.59	---	---	3.55	2.73	2.16	2.23	2.97	3.81	3.42
28	4.20	6.78	6.49	---	---	3.43	2.70	2.18	2.19	3.37	3.74	3.40
29	4.09	7.07	6.40	---	---	3.32	2.67	2.19	2.22	3.36	3.70	3.40
30	4.00	7.29	6.31	---	---	3.26	2.71	2.15	2.33	3.32	3.68	3.38
31	3.91	---	6.23	---	---	3.28	---	2.07	---	3.31	3.69	---
MEAN	5.73	4.17	7.27	---	---	---	3.07	2.42	2.12	2.72	3.69	3.62
MAX	7.98	7.29	7.87	---	---	---	3.32	2.83	2.33	3.37	4.28	3.95
MIN	3.91	3.21	6.23	---	---	---	2.67	2.07	1.97	2.36	2.95	3.26

02312500 WITHLACOOCHEE RIVER AT CROOM, FL--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1956, 1960-61, 1963, 1966 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	COLOR (PLAT-INUM-COBALT UNITS) (00080)	OXYGEN, DIS-SOLVED (MG/L) (00300)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)
OCT 03...	1305	1140	101	6.6	25.5	400	3.3	47	16
NOV 21...	1150	186	282	7.6	23.0	50	2.5	130	47
JAN 23...	1035	532	184	6.6	16.0	160	6.7	100	37
MAR 20...	1030	271	233	7.7	25.0	100	4.5	100	37
MAY 08...	1050	113	301	7.8	25.0	30	5.5	140	48
JUL 05...	1045	100	266	7.3	28.5	20	1.8	120	43
AUG 28...	1015	148	232	6.3	27.5	160	1.7	110	40

DATE	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)
OCT 03...	1.6	3.8	1.6	33	1.3	5.9	0.40	4.1	129
NOV 21...	3.1	5.2	0.80	125	5.1	10	0.20	6.2	177
JAN 23...	2.4	5.8	1.0	88	3.7	10	0.20	3.9	151
MAR 20...	2.8	6.3	2.3	94	4.3	12	0.10	3.7	181
MAY 08...	3.7	7.2	0.90	134	6.9	10	0.20	3.3	178
JUL 05...	3.3	6.0	0.60	115	5.2	11	0.10	7.7	151
AUG 28...	2.7	6.9	1.0	99	3.7	12	0.40	6.8	156

DATE	NITRO-GEN, NITRITE TOTAL (MG/L AS N) (00615)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS-PHOROUS TOTAL (MG/L AS P) (00665)	PHOS-PHORUS, ORTHO, TOTAL (MG/L AS P) (70507)	STRON-TIUM, DIS-SOLVED (UG/L AS SR) (01080)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
OCT 03...	0.020	0.080	0.050	1.6	0.180	0.160	80	--
NOV 21...	0.010	0.230	0.050	1.3	0.180	0.070	190	--
JAN 23...	0.010	0.120	0.020	0.84	0.080	0.050	90	--
MAR 20...	0.010	0.090	0.010	1.5	0.330	0.080	160	--
MAY 08...	<0.010	0.030	0.010	0.49	0.110	0.070	210	4.3
JUL 05...	<0.010	0.040	<0.010	0.33	0.040	0.020	220	--
AUG 28...	<0.010	0.020	0.010	1.0	0.090	0.060	160	19

WITHLACOOCHEE RIVER BASIN

02312600 WITHLACOOCHEE RIVER NEAR FLORAL CITY, FL

LOCATION.--Lat 28°44'36", long 82°13'13", in SE¼ sec.17, T.20 S., R.21 E., Citrus County, Hydrologic Unit 03100208, on left bank on upstream shoreward corner of pavillion at Trails End Camp, 1.1 mi downstream from diversions to Tsala Apopka Lake, 4.7 mi east of Floral City, and 62 mi upstream from mouth.

DRAINAGE AREA.--995 mi^2, approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1958 to January 1965 (gage heights only), February 1965 to September 1983 (discharge measurements and gage heights only); October 1983 to current year. Records of gage heights prior to October 1962 are unpublished and are available in files of the Orlando Subdistrict office.

REVISED RECORDS.--WDR FL-72-3: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1983, nonrecording gage at same site and datum.

REMARKS.--Records fair above 100 ft^3/s and poor below. Discharge published is for site at bridge on State Highway 48 about 2 mi upstream from gage and about 1 mi upstream from diversions to Tsala Apopka Lake through Leslie Heifner and Orange State Canals. High-water diversion in headwaters (station 02311000).

AVERAGE DISCHARGE.--6 years, 454 ft^3/s, 328,900 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,480 ft^3/s, Apr. 11,12, 1987, gage height, 44.13 ft; maximum gage height observed, 45.24 ft, Mar. 25, 1960; maximum reverse flow measured, 5.0 ft^3/s, July 24, 1981; minimum gage height observed, 37.48 ft, July 8, 1981.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,250 ft^3/s, Oct. 1, gage height, 43.07 ft; stage falling, peak occurred Sept. 21-23, 1988; maximum peak discharge, 1,440 ft^3/s, Dec. 13,14, gage height, 42.36 ft; minimum discharge, 116 ft^3/s, June 20; gage height, 38.87 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2170	421	919	867	785	421	212	182	128	150	178	201
2	2040	402	1000	844	800	423	209	181	126	156	179	202
3	1960	384	1070	822	812	430	206	177	125	159	178	205
4	1890	381	1150	788	826	418	203	173	125	159	179	204
5	1750	376	1220	764	836	405	205	170	128	157	179	203
6	1610	365	1270	742	837	394	201	167	130	155	178	202
7	1480	348	1300	716	841	379	199	163	133	153	176	201
8	1370	335	1330	697	836	367	196	160	136	151	174	200
9	1280	321	1350	674	819	356	194	158	141	148	173	200
10	1200	309	1360	648	810	346	192	157	137	146	177	200
11	1120	299	1390	631	795	335	190	159	133	143	178	199
12	1040	290	1420	610	775	326	189	158	130	142	181	198
13	989	284	1440	594	756	314	189	155	128	141	187	198
14	942	279	1420	575	731	302	189	153	125	140	189	198
15	899	274	1400	558	710	291	205	151	122	140	191	197
16	861	271	1380	543	680	282	211	148	120	141	193	201
17	830	268	1350	523	651	273	211	146	121	142	194	206
18	801	265	1320	504	627	267	211	142	119	143	195	204
19	775	263	1280	488	606	261	211	141	118	144	199	203
20	742	262	1220	473	587	255	210	140	120	147	208	200
21	715	260	1180	486	567	250	207	139	133	153	211	197
22	684	268	1150	543	557	244	206	139	142	170	211	196
23	653	425	1120	554	534	241	204	138	144	176	210	199
24	627	486	1080	577	510	240	201	136	144	178	209	200
25	597	543	1050	618	490	237	198	135	145	176	208	204
26	566	597	1020	657	472	233	194	133	144	173	208	205
27	532	657	998	692	456	230	191	131	142	171	209	202
28	497	720	979	716	440	226	187	131	141	171	207	200
29	466	781	948	737	---	222	183	132	142	172	205	197
30	438	842	919	758	---	219	180	131	146	172	204	193
31	419	---	895	771	---	217	---	129	---	174	202	---
TOTAL	31943	11976	36928	20170	19146	9404	5984	4655	3968	4843	5970	6015
MEAN	1030	399	1191	651	684	303	199	150	132	156	193	200
MAX	2170	842	1440	867	841	430	212	182	146	178	211	206
MIN	419	260	895	473	440	217	180	129	118	140	173	193
AC-FT	63360	23750	73250	40010	37980	18650	11870	9230	7870	9610	11840	11930

CAL YR 1988 TOTAL 238608 MEAN 652 MAX 3170 MIN 81 AC-FT 473300
WTR YR 1989 TOTAL 161002 MEAN 441 MAX 2170 MIN 118 AC-FT 319300

02312600 WITHLACOOCHEE RIVER NEAR FLORAL CITY, FL--Continued

GAGE HEIGHT, IN FEET ABOVE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	43.02	40.64	41.67	41.70	41.69	41.17	40.54	40.06	38.94	39.39	40.04	40.58
2	42.91	40.59	41.80	41.67	41.71	41.18	40.52	40.04	38.91	39.48	40.06	40.60
3	42.84	40.55	41.91	41.64	41.74	41.21	40.49	39.98	38.88	39.53	40.06	40.64
4	42.78	40.54	42.02	41.59	41.76	41.19	40.48	39.92	38.86	39.55	40.08	40.63
5	42.66	40.53	42.10	41.55	41.78	41.17	40.50	39.87	38.90	39.53	40.09	40.64
6	42.54	40.50	42.17	41.52	41.79	41.15	40.47	39.82	38.92	39.51	40.09	40.64
7	42.41	40.45	42.21	41.48	41.79	41.12	40.46	39.76	38.95	39.49	40.08	40.64
8	42.28	40.41	42.24	41.45	41.79	41.10	40.44	39.70	39.00	39.47	40.06	40.64
9	42.18	40.37	42.26	41.42	41.77	41.08	40.43	39.66	39.05	39.44	40.06	40.64
10	42.08	40.33	42.27	41.38	41.76	41.06	40.41	39.63	39.01	39.41	40.12	40.65
11	41.97	40.30	42.30	41.35	41.74	41.04	40.37	39.65	38.96	39.39	40.13	40.65
12	41.87	40.26	42.34	41.33	41.71	41.02	40.36	39.62	38.92	39.37	40.18	40.65
13	41.78	40.24	42.36	41.30	41.68	40.99	40.34	39.58	38.89	39.36	40.25	40.65
14	41.70	40.21	42.34	41.26	41.65	40.96	40.34	39.54	38.86	39.37	40.29	40.67
15	41.64	40.19	42.32	41.24	41.61	40.93	40.50	39.49	38.82	39.37	40.32	40.67
16	41.57	40.18	42.29	41.21	41.58	40.90	40.54	39.44	38.80	39.39	40.34	40.71
17	41.52	40.16	42.26	41.17	41.54	40.87	40.53	39.39	38.81	39.42	40.36	40.78
18	41.46	40.14	42.22	41.14	41.50	40.84	40.52	39.33	38.81	39.44	40.39	40.77
19	41.41	40.14	42.18	41.10	41.48	40.82	40.51	39.30	38.80	39.47	40.43	40.76
20	41.35	40.13	42.10	41.07	41.45	40.79	40.48	39.26	38.84	39.52	40.54	40.74
21	41.29	40.11	42.06	41.11	41.42	40.77	40.44	39.24	39.04	39.61	40.58	40.72
22	41.23	40.15	42.01	41.23	41.41	40.74	40.42	39.24	39.19	39.86	40.59	40.71
23	41.17	40.65	41.98	41.26	41.37	40.73	40.39	39.21	39.22	39.93	40.59	40.76
24	41.11	40.80	41.94	41.31	41.33	40.73	40.35	39.17	39.23	39.96	40.59	40.78
25	41.04	40.92	41.91	41.38	41.30	40.71	40.30	39.13	39.27	39.95	40.59	40.83
26	40.97	41.05	41.88	41.46	41.27	40.69	40.25	39.09	39.26	39.93	40.59	40.85
27	40.90	41.17	41.85	41.52	41.24	40.67	40.20	39.06	39.24	39.91	40.61	40.85
28	40.82	41.30	41.82	41.56	41.21	40.64	40.14	39.04	39.22	39.92	40.61	40.85
29	40.75	41.42	41.79	41.60	---	40.61	40.09	39.04	39.25	39.94	40.60	40.84
30	40.68	41.54	41.76	41.63	---	40.59	40.04	39.02	39.32	39.95	40.59	40.82
31	40.63	---	41.73	41.66	---	40.58	---	38.98	---	39.99	40.58	---
MEAN	41.70	40.53	42.07	41.40	41.57	40.90	40.39	39.46	39.01	39.61	40.34	40.71
MAX	43.02	41.54	42.36	41.70	41.79	41.21	40.54	40.06	39.32	39.99	40.61	40.85
MIN	40.63	40.11	41.67	41.07	41.21	40.58	40.04	38.98	38.80	39.36	40.04	40.58

CAL YR 1988 MEAN 41.12 MAX 43.58 MIN 39.09
WTR YR 1989 MEAN 40.64 MAX 43.02 MIN 38.80

02312600 WITHLACOOCHEE RIVER NEAR FLORAL CITY, FL--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1966 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	COLOR (PLAT-INUM-COBALT UNITS) (00080)	OXYGEN, DIS-SOLVED (MG/L) (00300)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)
OCT									
28...	1255	499	200	7.0	21.5	160	4.6	98	35
DEC									
22...	1140	1170	120	7.6	13.0	320	--	52	18
FEB									
15...	1300	666	141	7.2	17.5	240	--	60	21
APR									
10...	1055	187	283	7.4	25.0	60	6.6	130	45
JUN									
06...	1719	147	283	7.4	29.0	20	--	130	46
JUL									
31...	1310	160	218	7.3	31.0	30	6.2	96	33
SEP									
26...	1225	198	243	7.8	26.0	100	--	120	42

DATE	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)
OCT									
28...	2.4	4.8	0.80	<88	2.3	10	0.20	6.4	162
DEC									
22...	1.6	3.9	0.80	43	1.8	9.2	0.30	4.1	132
FEB									
15...	1.8	5.5	0.60	44	2.5	14	0.30	2.8	128
APR									
10...	3.2	7.1	0.70	119	4.6	12	0.20	3.8	170
JUN									
06...	3.9	6.3	0.60	118	6.2	10	0.20	4.1	163
JUL									
31...	3.2	6.6	0.10	83	6.9	12	0.30	4.1	133
SEP									
26...	2.8	7.0	0.70	104	4.5	11	0.30	6.6	174

DATE	NITRO-GEN, NITRITE TOTAL (MG/L AS N) (00615)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS-PHOROUS TOTAL (MG/L AS P) (00665)	PHOS-PHORUS, ORTHO, TOTAL (MG/L AS P) (70507)	STRON-TIUM, DIS-SOLVED (UG/L AS SR) (01080)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
OCT								
28...	0.010	0.040	0.020	1.1	0.080	0.050	190	--
DEC								
22...	<0.010	<0.020	0.010	1.1	0.050	0.030	90	--
FEB								
15...	0.010	0.040	<0.010	0.97	0.070	0.030	100	--
APR								
10...	<0.010	<0.020	<0.010	0.65	0.040	0.030	270	9.5
JUN								
06...	<0.010	0.020	0.020	1.1	0.040	0.030	280	--
JUL								
31...	<0.010	<0.020	0.010	0.78	0.030	0.010	290	--
SEP								
26...	<0.010	0.070	<0.010	0.97	0.070	0.040	160	17

WITHLACOOCHEE RIVER BASIN

02312635 JUMPER CREEK CANAL NEAR SUMTERVILLE, FL

LOCATION.--Lat 28°41'46", long 82°03'18", in NE¼ sec.1, T.21 S., R.22 E., Sumter County, Hydrologic Unit 03100208, near left bank on downstream side of bridge on State Highway 471, 3.4 mi south of Sumterville, 4.2 mi northeast of Bushnell, and 12.9 mi upstream from mouth.

DRAINAGE AREA.--28.6 mi^2.

PERIOD OF RECORD.--October 1976 to September 1977, March 1979 to current year.

GAGE.--Water-stage recorder. Datum of gage is 68.04 ft above National Geodetic Vertical Datum of 1929 (U.S. Soil Conservation Service bench mark).

REMARKS.--Estimated daily discharges: Mar. 16-28. Records poor. Flow affected by pumpage into and out of canal upstream and downstream from station.

AVERAGE DISCHARGE.--11 years (water years 1977, 1980-89), 22.4 ft^3/s, 16,230 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 145 ft^3/s, Apr. 2, 1987; maximum gage height, 8.55 ft, Apr. 2, 1987; no flow many days in most years; canal dry at gage for many days in 1982.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 34 ft^3/s, Oct. 19,20, July 31; maximum gage height, 7.07 ft, July 31; minimum daily discharge, 0.16 ft^3/s, June 3; minimum gage height, 4.30 ft, Feb. 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27	32	30	24	1.9	1.3	16	.82	2.2	7.2	30	22
2	29	32	30	15	1.9	1.4	12	.73	38	9.3	28	22
3	29	31	25	23	2.0	1.5	.87	.60	.16	13	28	21
4	29	29	30	19	1.3	1.3	2.6	.48	1.2	17	28	23
5	18	33	30	23	.67	1.2	5.1	.50	1.7	16	28	23
6	25	32	30	22	.69	1.2	14	2.9	.69	15	27	23
7	28	19	26	22	.92	1.2	14	2.3	.56	17	27	23
8	26	29	29	21	2.2	1.2	10	.82	1.3	16	26	22
9	15	31	29	13	1.9	1.1	11	.57	.56	15	28	24
10	17	16	29	23	1.7	1.1	12	.61	.48	6.1	26	23
11	29	29	30	23	1.6	.79	12	.76	.49	1.8	25	23
12	29	31	29	13	1.7	4.8	12	.52	3.7	9.8	28	23
13	29	31	16	23	1.4	8.3	12	.46	5.7	24	28	23
14	29	19	28	24	1.2	18	12	.45	6.4	16	27	21
15	23	31	30	18	1.2	17	1.8	.49	6.0	19	27	21
16	28	17	31	23	1.2	6.0	.89	.65	5.6	32	26	21
17	16	31	31	23	.89	3.5	.85	.41	6.1	30	26	20
18	28	30	31	18	1.1	1.7	.90	1.4	5.7	12	24	22
19	34	24	13	12	1.1	1.1	5.7	1.1	4.9	22	24	21
20	34	27	25	20	1.2	.96	.87	.30	3.2	23	26	21
21	15	17	26	22	1.7	.98	.82	.62	6.2	23	25	21
22	28	32	26	22	2.1	1.0	.76	.59	6.8	23	26	19
23	29	33	22	19	1.4	1.1	.66	.33	3.1	24	25	22
24	27	31	29	19	1.2	2.1	.64	.28	6.6	23	25	22
25	24	31	30	7.4	1.3	9.0	.59	.23	7.6	24	24	21
26	24	31	23	5.8	1.2	12	.52	.21	4.9	22	21	20
27	23	19	25	1.2	1.2	15	.57	.20	4.7	24	24	20
28	23	29	23	.95	1.3	16	.47	.27	11	21	24	20
29	24	17	23	.88	---	16	.63	3.9	9.0	24	23	20
30	29	29	20	.83	---	16	.99	3.3	14	25	23	20
31	32	---	14	.94	---	16	---	1.4	---	34	22	---
TOTAL	807	823	813	502.00	39.17	179.83	163.23	28.20	130.92	588.2	799	647
MEAN	26.0	27.4	26.2	16.2	1.40	5.80	5.44	.91	4.36	19.0	25.8	21.6
MAX	34	33	31	24	2.2	18	16	3.9	14	34	30	24
MIN	15	16	13	.83	.67	.79	.47	.20	.16	1.8	21	19
AC-FT	1600	1630	1610	996	78	357	324	56	260	1170	1580	1280

CAL YR 1988 TOTAL 8160.2 MEAN 22.3 MAX 50 MIN 3.8 AC-FT 16190
WTR YR 1989 TOTAL 5520.55 MEAN 15.1 MAX 34 MIN .16 AC-FT 10950

02312640 JUMPER CREEK CANAL NEAR BUSHNELL, FL

LOCATION.--Lat 28°41'45", long 82°06'34", in NE¼ sec.4, T.21 S., R.22 E., Sumter County, Hydrologic Unit 03100208, near center of span on downstream side of bridge on State Highway 475, 2.2 mi north of Bushnell, and 10 mi upstream from mouth.

DRAINAGE AREA.--40 mi^2, approximately.

PERIOD OF RECORD.--September 1963 to current year.

REVISED RECORDS.--WDR FL-81-3: 1980 (m).

GAGE.--Water-stage recorder. Datum of gage is 55.00 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Nov. 21 to Dec. 12. Records fair except those for estimated daily discharges, which are poor. Diurnal fluctuation caused by mining operations upstream; daily flows are not affected appreciably.

AVERAGE DISCHARGE.--26 years, 27.3 ft^3/s, 19,780 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 227 ft^3/s, Feb. 3, 1970, gage height, 6.06 ft; maximum gage height, 6.66 ft, Apr. 2, 1987; minimum daily discharge, 0.06 ft^3/s, Dec. 25, 1981; minimum gage height, 0.76 ft, Dec. 25,26, 1981.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 50 ft^3/s, Aug. 1, gage height, 4.76 ft; minimum, 1.7 ft^3/s, May 27, June 4; minimum gage height, 2.15 ft, June 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	31	33	31	27	7.5	3.8	17	4.9	3.9	14	45	32
2	33	33	32	22	7.4	4.4	17	4.8	2.9	14	37	32
3	34	33	31	27	7.1	4.4	7.3	4.4	2.5	18	36	33
4	34	32	31	26	7.2	4.1	7.0	3.9	2.1	19	35	33
5	26	34	32	26	6.2	4.0	10	3.9	3.3	23	34	33
6	31	34	32	27	6.2	4.0	17	4.7	3.5	21	34	32
7	31	26	31	26	6.0	4.0	18	6.1	3.5	22	33	32
8	32	31	31	27	5.5	4.0	17	4.0	4.6	21	32	32
9	24	33	31	21	5.6	4.1	15	3.9	3.7	21	33	31
10	24	25	31	26	5.3	4.1	16	3.8	3.2	16	33	31
11	31	29	32	27	4.9	3.8	16	4.6	3.1	8.9	32	31
12	31	33	31	21	4.6	4.9	16	3.7	4.4	13	32	30
13	31	33	23	26	4.4	7.2	16	3.4	7.0	22	33	30
14	31	26	29	26	4.0	12	17	3.3	8.3	23	33	30
15	31	32	29	26	4.0	14	11	3.3	8.2	21	32	30
16	31	24	30	24	3.9	15	7.2	3.2	7.8	23	31	30
17	23	31	31	27	3.9	15	6.6	3.0	8.1	36	31	30
18	29	32	30	26	3.9	5.7	6.4	2.7	8.5	18	31	29
19	33	29	22	17	4.0	4.8	9.9	3.8	8.0	24	30	29
20	33	31	26	24	3.6	4.7	6.5	2.7	5.9	26	33	29
21	23	28	28	26	3.6	4.8	5.8	2.8	9.2	26	31	28
22	29	34	28	27	4.4	5.0	5.8	3.4	15	27	31	29
23	30	35	27	25	4.1	5.4	5.6	2.8	9.5	28	31	28
24	30	33	27	24	4.0	5.2	5.3	2.5	11	27	31	30
25	28	33	30	18	4.0	5.2	5.1	2.5	14	27	31	31
26	27	33	28	15	4.0	12	4.7	2.5	12	27	27	31
27	27	32	28	10	3.8	15	4.6	2.4	9.4	25	30	30
28	27	27	27	9.0	3.8	16	4.6	2.6	15	36	31	30
29	28	31	27	8.7	---	16	4.3	4.4	16	30	30	29
30	29	27	26	8.4	---	17	5.5	5.2	18	31	29	29
31	33	---	21	7.9	---	17	---	3.5	---	33	29	---
TOTAL	915	927	893	678.0	136.9	248.6	305.2	112.7	231.6	720.9	1001	914
MEAN	29.5	30.9	28.8	21.9	4.89	7.95	10.2	3.64	7.72	23.3	32.3	30.5
MAX	34	35	32	27	7.5	17	18	6.1	18	36	45	33
MIN	23	24	21	7.9	3.6	3.8	4.3	2.4	2.1	8.9	27	28
AC-FT	1810	1840	1770	1340	272	489	605	224	459	1430	1990	1810

CAL YR 1988 TOTAL 9659 MEAN 26.4 MAX 42 MIN 12 AC-FT 19160
WTR YR 1989 TOTAL 7081.9 MEAN 19.4 MAX 45 MIN 2.1 AC-FT 14050

WITHLACOOCHEE RIVER BASIN

02312645 JUMPER CREEK CANAL NEAR WAHOO, FL

LOCATION.--Lat 28°42'15", long 82°09'26", in SE¼ sec.36, T.20 S., R.21 E, Sumter County, Hydrologic Unit 03100208, on right bank 15 ft downstream from Bevilles Bridge, 2.5 mi northeast of Wahoo, 3.9 mi northwest of Bushnell, and 5.7 mi upstream from mouth.

DRAINAGE AREA.--50.6 mi^2.

PERIOD OF RECORD.--March 1979 to current year.

REVISED RECORDS.--WDR FL-81-3: 1980 (m).

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Oct. 1 to Nov. 2. Records fair except those for estimated daily discharges, which are poor.

AVERAGE DISCHARGE.--10 years, 38.3 ft^3/s, 27,750 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 265 ft^3/s, May 8, 1979, gage height 48.30 ft; maximum gage height, 48.47 ft, Mar. 31, 1987; minimum daily discharge, 2.8 ft^3/s, Dec. 22-25, 1981; minimum gage height, 45.77 ft, all or part of each day Dec. 22-25, 1981.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 84 ft^3/s, Nov. 23, gage height, 48.16 ft; minimum, 9.9 ft^3/s, Feb. 21; minimum gage height, 46.27 ft, June 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	56	38	44	33	16	11	22	17	14	34	44	35
2	56	37	45	35	15	12	22	16	14	31	48	39
3	55	37	45	32	15	14	18	15	12	29	45	43
4	52	39	43	34	15	13	13	15	12	30	43	40
5	45	38	44	33	14	12	18	14	12	31	41	39
6	47	40	45	34	14	11	19	14	16	39	40	38
7	46	38	45	33	13	11	22	17	17	35	39	38
8	41	34	43	33	13	11	22	15	21	32	38	37
9	40	36	44	31	13	11	20	14	19	31	40	37
10	40	36	44	29	12	11	21	15	16	29	43	36
11	40	32	47	32	12	11	21	19	15	24	41	36
12	39	36	53	31	11	11	22	16	15	22	39	36
13	39	38	51	29	11	13	22	15	17	26	40	35
14	39	37	44	31	11	15	22	15	19	30	39	34
15	39	34	46	31	11	19	27	14	20	28	38	35
16	38	36	46	29	11	20	26	14	21	29	38	34
17	38	33	47	30	10	22	20	14	20	32	37	35
18	39	37	46	31	10	17	18	13	20	34	36	34
19	40	37	44	26	10	12	18	14	20	29	37	34
20	41	35	38	25	10	12	21	14	19	31	41	34
21	43	35	41	31	10	11	17	13	23	32	43	33
22	42	35	41	45	11	12	17	14	42	33	40	33
23	39	77	42	40	11	16	16	14	33	37	38	35
24	38	64	39	34	11	15	16	13	28	38	37	36
25	36	52	41	31	11	13	16	13	35	35	37	39
26	35	49	42	25	11	15	15	13	29	34	37	39
27	35	48	40	22	11	20	15	12	25	33	38	37
28	35	43	39	19	10	21	15	12	26	38	39	36
29	35	44	38	18	---	21	15	14	30	42	37	35
30	36	40	38	17	---	21	16	16	33	38	36	35
31	37	---	35	17	---	22	---	15	---	38	35	---
TOTAL	1281	1215	1340	921	333	456	572	449	643	1004	1224	1087
MEAN	41.3	40.5	43.2	29.7	11.9	14.7	19.1	14.5	21.4	32.4	39.5	36.2
MAX	56	77	53	45	16	22	27	19	42	42	48	43
MIN	35	32	35	17	10	11	13	12	12	22	35	33
AC-FT	2540	2410	2660	1830	661	904	1130	891	1280	1990	2430	2160

CAL YR 1988 TOTAL 13978 MEAN 38.2 MAX 77 MIN 26 AC-FT 27730
WTR YR 1989 TOTAL 10525 MEAN 28.8 MAX 77 MIN 10 AC-FT 20880

WITHLACOOCHEE RIVER BASIN

02312667 SHADY BROOK NEAR SUMTERVILLE, FL

LOCATION.--Lat 28°46'12", long 82°03'50", in NW¼ sec.12, T.20 S., R.22 E., Sumter County, Hydrologic Unit 03100208, on right bank in Thompkins Park, 400 ft upstream from bridge on U.S. Highway 301, and 1.7 mi north of Sumterville.

DRAINAGE AREA.--8.0 mi^2, approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--1932-33, 1946, 1956, 1961, 1965-67, 1980-81 (miscellaneous discharge measurements), March 1982 to current year. Prior to November 1980, published as Panasoffkee River near Sumterville.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Mar. 30 to Apr. 10, June 6 to July 21, July 29 to Sept.6. Records good except for estimated daily discharges, which are fair. Records include wastewater of ground-water origin from mining operations upstream.

AVERAGE DISCHARGE.--7 years, 48.8 ft^3/s, 35,360 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 340 ft^3/s, Apr. 23, 1983, gage height, 50.76 ft; minimum discharge, 1.4 ft^3/s, May 7,8, 1985; minimum gage height, 46.66 ft, May 8, 1985.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 131 ft^3/s, July 28, gage height, 49.55 ft; minimum daily, 5.0 ft^3/s, June 20, minimum gage height recorded, 47.24 ft, all or part of each day June 3-5, but may have been lower during period of no gage height record June 6 to July 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	36	20	44	26	40	22	17	17	7.9	14	76	29
2	36	20	42	26	39	23	17	16	7.6	16	77	28
3	40	19	40	26	37	25	18	16	7.4	18	86	28
4	49	21	38	25	36	25	18	15	7.1	20	78	29
5	50	21	36	24	35	25	18	14	7.1	22	75	30
6	47	21	34	24	34	26	18	14	7.1	24	71	30
7	44	20	33	24	31	26	19	13	7.4	26	69	33
8	43	20	31	23	30	28	19	12	7.8	28	66	36
9	42	19	30	23	29	28	19	12	8.1	30	63	38
10	40	19	29	23	28	28	20	12	8.1	31	61	38
11	38	19	29	23	28	27	20	14	7.8	35	59	37
12	36	19	32	22	28	27	20	13	7.9	36	58	36
13	34	18	33	22	28	26	19	12	7.6	39	56	34
14	32	18	32	21	26	25	19	11	7.1	42	55	32
15	31	18	31	21	25	23	23	11	6.7	45	53	30
16	29	18	31	21	24	22	26	10	6.1	46	52	29
17	28	18	31	21	23	21	24	9.8	5.5	46	50	30
18	27	17	30	21	22	21	22	9.4	5.4	46	50	28
19	26	17	30	21	22	21	21	9.2	5.3	46	48	26
20	25	17	29	21	21	20	21	9.1	5.0	46	47	24
21	24	17	28	24	22	19	20	9.4	6.2	47	45	23
22	24	19	28	33	23	18	20	9.8	7.8	47	44	22
23	23	42	27	35	23	19	19	9.2	8.4	48	42	24
24	23	44	27	36	23	20	18	8.8	8.4	47	40	23
25	21	41	27	35	23	19	17	8.4	8.4	46	39	23
26	21	38	27	36	23	19	16	8.0	8.1	45	38	23
27	20	39	27	39	23	19	15	7.8	7.9	45	36	22
28	20	41	27	41	23	18	15	8.1	8.8	118	35	21
29	20	43	27	42	---	17	14	9.7	11	84	34	20
30	19	44	27	42	---	17	15	8.6	12	76	32	19
31	19	---	26	41	---	17	---	8.1	---	75	30	---
TOTAL	967	747	963	862	769	691	567	345.4	227.0	1334	1665	845
MEAN	31.2	24.9	31.1	27.8	27.5	22.3	18.9	11.1	7.57	43.0	53.7	28.2
MAX	50	44	44	42	40	28	26	17	12	118	86	38
MIN	19	17	26	21	21	17	14	7.8	5.0	14	30	19
AC-FT	1920	1480	1910	1710	1530	1370	1120	685	450	2650	3300	1680

CAL YR 1988 TOTAL 13136 MEAN 35.9 MAX 107 MIN 11 AC-FT 26060
WTR YR 1989 TOTAL 9982.4 MEAN 27.3 MAX 118 MIN 5.0 AC-FT 19800

WITHLACOOCHEE RIVER BASIN

02312667 SHADY BROOK NEAR SUMTERVILLE, FL--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water year 1983 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	SPECIFIC CONDUCTANCE (US/CM) (00095)	PH (STANDARD UNITS) (00400)	TEMPERATURE WATER (DEG C) (00010)	COLOR (PLATINUM-COBALT UNITS) (00080)	OXYGEN, DISSOLVED (MG/L) (00300)	HARDNESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DISSOLVED (MG/L AS CA) (00915)	MAGNESIUM, DISSOLVED (MG/L AS MG) (00925)	SODIUM, DISSOLVED (MG/L AS NA) (00930)
APR										
10...	1800	306	7.7	23.0	60	4.6	140	50	3.5	7.5
SEP										
06...	1500	225	7.1	27.0	100	4.2	130	47	2.9	6.1

DATE	POTASSIUM, DISSOLVED (MG/L AS K) (00935)	ALKALINITY LAB (MG/L AS CACO3) (90410)	SULFATE DISSOLVED (MG/L AS SO4) (00945)	CHLORIDE, DISSOLVED (MG/L AS CL) (00940)	FLUORIDE, DISSOLVED (MG/L AS F) (00950)	SILICA, DISSOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L) (70300)	NITROGEN, NITRITE TOTAL (MG/L AS N) (00615)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITROGEN, AMMONIA TOTAL (MG/L AS N) (00610)
APR										
10...	0.80	131	3.5	14	0.30	9.8	194	<0.010	0.060	0.010
SEP										
06...	0.90	120	3.1	11	0.10	14	190	<0.010	0.090	0.020

DATE	NITROGEN,AMMONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOSPHOROUS TOTAL (MG/L AS P) (00665)	PHOSPHORUS, ORTHO, TOTAL (MG/L AS P) (70507)	ALUMINUM, TOTAL RECOVERABLE (UG/L AS AL) (01105)	ARSENIC TOTAL (UG/L AS AS) (01002)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD) (01027)	COPPER, DISSOLVED (UG/L AS CU) (01040)	IRON, TOTAL RECOVERABLE (UG/L AS FE) (01045)	IRON, DISSOLVED (UG/L AS FE) (01046)
APR									
10...	0.68	0.080	0.060	<10	<1	<1	2	270	150
SEP									
06...	0.93	0.140	0.110	50	<1	<1	6	570	310

DATE	LEAD, TOTAL RECOVERABLE (UG/L AS PB) (01051)	LEAD, DISSOLVED (UG/L AS PB) (01049)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN) (01055)	MANGANESE, DISSOLVED (UG/L AS MN) (01056)	MERCURY TOTAL RECOVERABLE (UG/L AS HG) (71900)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI) (01067)	STRONTIUM, DISSOLVED (UG/L AS SR) (01080)	ZINC, DISSOLVED (UG/L AS ZN) (01090)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
APR									
10...	<5	<5	10	10	0.40	5	200	<10	10
SEP									
06...	<1	<1	30	20	<0.10	2	150	20	15

WITHLACOOCHEE RIVER BASIN

284950082082001 LITTLE JONES CREEK AT MOUTH

WATER-QUALITY RECORDS

LOCATION.--Lat 28°49'50", long 82°08'20", in SE¼ sec.18, T.19 S., R.22 E., Sumter County, Hydrologic Unit 03100208, samples collected from boat, at mouth of Jones Creek, 1.6 mi north of Outlet River, 2.0 mi north of Panacoochee Retreats.

DRAINAGE AREA.--Indeterminate.

PERIOD OF RECORD.--Water years 1977 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	SPECIFIC CONDUCTANCE (US/CM) (00095)	PH (STANDARD UNITS) (00400)	TEMPERATURE WATER (DEG C) (00010)	COLOR (PLATINUM-COBALT UNITS) (00080)	OXYGEN, DISSOLVED (MG/L) (00300)	HARDNESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DISSOLVED (MG/L AS CA) (00915)	MAGNESIUM, DISSOLVED (MG/L AS MG) (00925)	SODIUM, DISSOLVED (MG/L AS NA) (00930)
APR										
17...	1215	322	8.0	22.5	5	6.6	150	53	5.2	4.9
SEP										
28...	1130	341	6.9	24.5	40	--	160	56	5.5	5.5

DATE	POTASSIUM, DISSOLVED (MG/L AS K) (00935)	ALKALINITY LAB (MG/L AS CACO3) (90410)	SULFATE DISSOLVED (MG/L AS SO4) (00945)	CHLORIDE, DISSOLVED (MG/L AS CL) (00940)	FLUORIDE, DISSOLVED (MG/L AS F) (00950)	SILICA, DISSOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L) (70300)	NITROGEN, NITRITE TOTAL (MG/L AS N) (00615)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITROGEN, AMMONIA TOTAL (MG/L AS N) (00610)
APR										
17...	0.50	127	21	9.1	0.20	11	186	<0.010	1.10	<0.010
SEP										
28...	0.70	123	33	10	0.20	10	222	<0.010	0.790	<0.010

DATE	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOSPHOROUS TOTAL (MG/L AS P) (00665)	PHOSPHORUS, ORTHO, TOTAL (MG/L AS P) (70507)	ALUMINUM, TOTAL RECOVERABLE (UG/L AS AL) (01105)	ARSENIC TOTAL (UG/L AS AS) (01002)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD) (01027)	COPPER, DISSOLVED (UG/L AS CU) (01040)	IRON, TOTAL RECOVERABLE (UG/L AS FE) (01045)	IRON, DISSOLVED (UG/L AS FE) (01046)
APR									
17...	<0.20	0.060	0.050	<10	<1	<1	<1	60	20
SEP									
28...	0.35	0.050	0.050	<10	<1	<1	1	80	40

DATE	LEAD, TOTAL RECOVERABLE (UG/L AS PB) (01051)	LEAD, DISSOLVED (UG/L AS PB) (01049)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN) (01055)	MANGANESE, DISSOLVED (UG/L AS MN) (01056)	MERCURY TOTAL RECOVERABLE (UG/L AS HG) (71900)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI) (01067)	STRONTIUM, DISSOLVED (UG/L AS SR) (01080)	ZINC, DISSOLVED (UG/L AS ZN) (01090)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
APR									
17...	<5	<5	<10	<10	0.10	3	340	<10	2.5
SEP									
28...	<1	<1	<10	<10	<0.10	1	340	10	6.9

WITHLACOOCHEE RIVER BASIN

02312690 CHITTY CHATTY CREEK NEAR WILDWOOD, FL

LOCATION.--Lat 28°48'33", long 81°58'59", in NW¼ sec.26, T.19 S., R.23 E., Sumter County, Hydrologic Unit 03100208, near center of span on downstream side of box culverts on county road 468, 2.0 mi upstream from Lake Okahumpka, and 5.0 mi southeast of Wildwood.

DRAINAGE AREA.--38 mi^2, approximately.

PERIOD OF RECORD.--July 1959 to March 1960 (discharge measurements only), September 1963 to July 1966, December 1978 to current year. Prior to December 1978 records not equivalent because of channelization.

REVISED RECORDS.-- WDR FL-79-3: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 52.70 ft above National Geodetic Vertical Datum of 1929. Prior to Dec. 15, 1978, at datum 3.30 ft higher.

REMARKS.--Records fair.

AVERAGE DISCHARGE.--10 years (water years 1980-89), 13.2 ft^3/s, 4.72 in/yr, 9,560 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 220 ft^3/s, Mar. 31, 1987, gage height, 7.91 ft; no flow for many days most years; minimum gage height, 3.13 ft, Oct. 23,24, 1981.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of March 1960 reached a stage of 6.55 ft datum then in use, from floodmarks, discharge, 260 ft^3/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 80 ft^3/s, July 1, gage height, 6.36 ft; no flow for many days; minimum gage height, 4.18 ft, June 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	.00	16	11	19	10	7.6	6.4	.00	78	35	3.4
2	9.3	.00	13	11	19	21	6.9	5.8	.00	75	56	5.9
3	11	.00	12	11	19	24	6.5	4.7	.00	73	59	35
4	23	.28	11	11	18	23	8.1	3.5	.00	63	51	39
5	20	1.7	10	11	18	21	18	2.7	.00	51	43	35
6	16	2.3	9.2	11	17	17	18	2.0	.00	46	36	31
7	12	2.3	8.7	11	17	15	14	1.3	.00	64	29	27
8	10	2.3	8.1	10	17	14	12	.46	.00	59	24	25
9	8.7	2.4	7.7	10	15	14	11	.04	.00	49	21	23
10	8.0	2.3	7.1	10	14	15	9.8	.17	.00	40	24	23
11	7.4	2.1	8.4	10	13	14	9.3	2.0	.00	35	20	20
12	6.8	1.8	18	11	13	14	9.0	1.9	.00	46	28	16
13	6.1	1.7	20	11	13	13	8.6	1.3	.00	46	28	13
14	5.2	1.4	17	11	13	13	9.0	.96	.00	41	24	10
15	4.5	.99	14	11	13	12	15	.44	.00	36	20	8.5
16	3.8	.57	12	11	13	11	18	.00	.00	31	18	8.7
17	3.3	.34	11	11	13	11	15	.00	.00	28	14	10
18	2.8	.09	10	10	12	10	12	.00	.00	24	9.5	8.8
19	2.7	.00	9.7	9.9	12	9.7	11	.00	.00	24	6.6	6.4
20	2.5	.00	9.4	9.8	12	9.3	9.8	.00	.00	26	11	4.8
21	2.3	.00	13	14	12	9.0	9.1	.00	.17	30	17	3.5
22	2.1	1.0	16	35	14	8.7	8.8	.00	2.9	30	15	2.6
23	1.8	35	14	39	15	9.0	8.2	.00	4.8	39	14	4.5
24	1.4	44	12	36	14	9.9	7.6	.00	19	42	12	5.6
25	.97	36	11	33	13	9.6	6.8	.00	33	39	9.5	6.7
26	.52	30	11	29	12	9.3	6.0	.00	32	34	8.1	8.8
27	.14	25	10	26	10	9.0	5.2	.00	25	28	7.2	8.4
28	.00	21	10	24	9.3	8.5	4.5	.00	16	29	5.2	7.3
29	.00	19	10	22	---	8.0	4.0	.00	23	29	3.2	6.3
30	.00	17	11	21	---	7.7	5.4	.00	72	24	1.9	6.8
31	.00	---	11	20	---	7.8	---	.00	---	22	3.0	---
TOTAL	183.33	250.57	361.3	511.7	399.3	387.5	294.2	33.67	227.87	1281	653.2	414.0
MEAN	5.91	8.35	11.7	16.5	14.3	12.5	9.81	1.09	7.60	41.3	21.1	13.8
MAX	23	44	20	39	19	24	18	6.4	72	78	59	39
MIN	.00	.00	7.1	9.8	9.3	7.7	4.0	.00	.00	22	1.9	2.6
AC-FT	364	497	717	1010	792	769	584	67	452	2540	1300	821
CFSM	.16	.22	.31	.43	.38	.33	.26	.03	.20	1.09	.55	.36
IN.	.18	.25	.35	.50	.39	.38	.29	.03	.22	1.25	.64	.41

CAL YR 1988 TOTAL 4415.76 MEAN 12.1 MAX 92 MIN .00 AC-FT 8760 CFSM .32 IN. 4.32
WTR YR 1989 TOTAL 4997.64 MEAN 13.7 MAX 78 MIN .00 AC-FT 9910 CFSM .36 IN. 4.89

WITHLACOOCHEE RIVER BASIN

02312700 OUTLET RIVER AT PANACOOCHEE RETREATS, FL

LOCATION.--Lat 28°49'01", long 82°08'40", in SE¼ sec.19, T.19 S., R.22 E., Sumter County, Hydrologic Unit 03100208, on west shore of Lake Panasoffkee, 0.8 mi north of outlet, 1.3 mi north of Panacoochee Retreats, 2.0 mi upstream from mouth, and 5.1 mi northwest of town of Lake Panasoffkee.

DRAINAGE AREA.--420 mi^2, approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1962 to current year. Prior to October 1967, published as Panasoffkee River near Lake Panasoffkee.

REVISED RECORDS.--WDR FL-72-3: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (Florida Department of Transportation bench mark). Prior to Dec. 18, 1962, nonrecording gage and Dec. 18, 1962, to Oct. 7, 1975, water-stage recorder at sites within 0.8 mi south at same datum.

REMARKS.--Records poor. Discharge measurements made at bridge on State Highway 470, about 1 mi downstream from lake outlet. Flow affected at times by backwater from Withlacoochee River. Prior to 1962, flow partially controlled by small rock dams and at times during 1962-64 by a temporary sheet piling dam about 400 ft downstream from bridge on State Highway 470. Gage heights are published as elevations for Lake Panasoffkee (station 02312698) in the section of this report entitled LAKE ELEVATIONS.

AVERAGE DISCHARGE.--27 years, 195 ft^3/s, 6.30 in/yr, 141,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 784 ft^3/s, Oct. 6, 1982; maximum gage height, 42.49 ft, Feb. 9, 1970; no flow June 27 to July 15, 1963, temporary dam in place; minimum daily gage height, 37.81 ft, July 16, 1981.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 550 ft^3/s, Oct. 1, stage falling, peak occurred Sept. 29, 1988; maximum peak discharge, 243 ft^3/s, July 30; maximum peak gage height, 40.06 ft, Dec. 22; minimum discharge, 63 ft^3/s, Nov. 22; minimum gage height, 38.35 ft, June 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	548	205	100	128	103	120	105	117	75	121	221	147
2	541	196	99	122	105	130	103	111	76	122	217	145
3	542	187	99	117	106	140	103	109	76	126	210	148
4	547	181	101	110	107	141	103	108	78	125	207	148
5	540	173	104	112	108	142	104	102	78	127	199	146
6	528	166	107	109	112	139	102	97	81	131	191	143
7	515	155	110	107	113	134	101	95	85	132	184	140
8	504	147	114	103	112	133	101	94	88	132	178	139
9	492	139	119	99	111	126	99	95	85	131	173	139
10	480	132	124	96	112	126	99	94	82	130	176	137
11	469	127	133	92	113	127	97	87	80	127	189	134
12	455	117	144	91	114	125	97	85	83	126	191	131
13	440	106	150	88	117	125	95	84	83	126	199	126
14	428	100	157	86	118	125	94	83	84	126	196	122
15	413	94	159	83	118	122	109	81	84	127	190	120
16	400	88	160	79	117	122	117	82	82	128	183	121
17	387	84	156	76	116	128	121	81	82	128	178	140
18	374	79	158	75	113	124	119	82	88	128	173	137
19	361	75	158	73	115	121	115	85	90	131	166	133
20	351	70	156	70	117	118	113	83	87	133	171	127
21	338	67	156	71	119	114	109	86	89	132	174	117
22	327	66	156	85	119	114	109	82	87	143	171	115
23	317	94	155	92	107	118	107	80	83	152	168	120
24	306	108	154	98	110	118	105	80	91	158	162	120
25	291	114	150	101	117	117	102	80	98	161	157	123
26	277	116	146	101	118	116	98	82	98	156	156	122
27	264	114	144	101	119	116	97	79	97	151	163	118
28	249	106	140	101	118	113	94	78	96	182	162	120
29	235	105	136	102	---	111	94	79	104	185	159	118
30	222	103	134	102	---	111	101	77	112	191	155	117
31	216	---	131	103	---	109	---	76	---	213	149	---
TOTAL	12357	3614	4210	2973	3174	3825	3113	2734	2602	4381	5568	3913
MEAN	399	120	136	95.9	113	123	104	88.2	86.7	141	180	130
MAX	548	205	160	128	119	142	121	117	112	213	221	148
MIN	216	66	99	70	103	109	94	76	75	121	149	115
AC-FT	24510	7170	8350	5900	6300	7590	6170	5420	5160	8690	11040	7760
CFSM	.95	.29	.32	.23	.27	.29	.25	.21	.21	.34	.43	.31
IN.	1.09	.32	.37	.26	.28	.34	.28	.24	.23	.39	.49	.35

CAL YR 1988 TOTAL 91127 MEAN 249 MAX 553 MIN 66 AC-FT 180800 CFSM .59 IN. 8.07
WTR YR 1989 TOTAL 52464 MEAN 144 MAX 548 MIN 66 AC-FT 104100 CFSM .34 IN. 4.65

02312700 OUTLET RIVER AT PANACOOCHEE RETREATS, FL--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1908, 1966 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	SPECIFIC CONDUCTANCE (US/CM) (00095)	PH (STANDARD UNITS) (00400)	TEMPERATURE WATER (DEG C) (00010)	COLOR (PLATINUM-COBALT UNITS) (00080)	OXYGEN, DISSOLVED (MG/L) (00300)	HARDNESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DISSOLVED (MG/L AS CA) (00915)	MAGNESIUM, DISSOLVED (MG/L AS MG) (00925)	SODIUM, DISSOLVED (MG/L AS NA) (00930)
APR										
12...	1600	220	8.8	21.0	10	8.9	97	31	4.6	4.7
SEP										
28...	1400	235	7.9	29.5	10	--	110	36	4.6	6.0

DATE	POTASSIUM, DISSOLVED (MG/L AS K) (00935)	ALKALINITY LAB (MG/L AS CACO3) (90410)	SULFATE DISSOLVED (MG/L AS SO4) (00945)	CHLORIDE, DISSOLVED (MG/L AS CL) (00940)	FLUORIDE, DISSOLVED (MG/L AS F) (00950)	SILICA, DISSOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L) (70300)	NITROGEN, NITRITE TOTAL (MG/L AS N) (00615)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITROGEN, AMMONIA TOTAL (MG/L AS N) (00610)
APR										
12...	<0.10	64	26	10	0.20	4.7	134	<0.010	<0.020	<0.010
SEP										
28...	0.40	82	25	10	0.30	13	164	<0.010	0.070	<0.010

DATE	NITROGEN,AMMONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOSPHOROUS TOTAL (MG/L AS P) (00665)	PHOSPHORUS, ORTHO, TOTAL (MG/L AS P) (70507)	ALUMINUM, TOTAL RECOVERABLE (UG/L AS AL) (01105)	ARSENIC TOTAL (UG/L AS AS) (01002)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD) (01027)	COPPER, DISSOLVED (UG/L AS CU) (01040)	IRON, TOTAL RECOVERABLE (UG/L AS FE) (01045)	IRON, DISSOLVED (UG/L AS FE) (01046)
APR									
12...	0.45	<0.020	0.010	<10	<1	<1	<1	30	<10
SEP									
28...	0.51	<0.020	<0.010	20	<1	<1	<1	30	10

DATE	LEAD, TOTAL RECOVERABLE (UG/L AS PB) (01051)	LEAD, DISSOLVED (UG/L AS PB) (01049)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN) (01055)	MANGANESE, DISSOLVED (UG/L AS MN) (01056)	MERCURY TOTAL RECOVERABLE (UG/L AS HG) (71900)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI) (01067)	STRONTIUM, DISSOLVED (UG/L AS SR) (01080)	ZINC, DISSOLVED (UG/L AS ZN) (01090)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
APR									
12...	<5	<5	<10	<10	<0.10	4	320	<10	4.7
SEP									
28...	<1	<1	<10	<10	<0.10	<1	310	<10	7.1

PEACE, WITHLACOOCHEE, HILLSBOROUGH RIVERS AND WESTERN COASTAL AREA

WITHLACOOCHEE RIVER BASIN

02312720 WITHLACOOCHEE RIVER AT WYSONG DAM, AT CARLSON, FL

LOCATION.--Lat 28°49'23", long 82°11'00", in NW¼ sec.23, T.19 S., R.21 E., Sumter County, Hydrologic Unit 03100208, at downstream end of left wall of lock of Wysong Dam, at Carlson, 1.8 mi downstream from Outlet River, 2.7 mi southeast of Rutland, and 55 mi upstream from mouth.

DRAINAGE AREA.--1,520 mi^2, approximately.

PERIOD OF RECORD.--August 1965 to September 1980, October 1980 to September 1981 (monthly mean discharge only), October 1981 to current year. Prior to October 1967, published as "at Carlson's Landing, near Lake Panasoffkee."

REVISED RECORDS.--WDR FL-72-3: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (Florida Department of Transportation bench mark).

REMARKS.--Records fair. Some diversions upstream from station at times into Tsala Apopka Lake. High-water diversion in headwaters (station 02311000). Inflatable fabri-dam removed June 27, 1988.

AVERAGE DISCHARGE.--24 years, 670 ft^3/s, 485,400 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 3,920 ft^3/s, Oct. 11, 1979; maximum gage height, 41.10 ft, Oct. 11, 1979; minimum daily discharge, unknown; minimum gage height, 34.84 ft, June 2, 1981.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 2,160 ft^3/s, Oct. 1, occurred on recession following crest of Sept 27-29, 1988; maximum daily discharge for peak event during year, 1,340 ft^3/s, Dec. 17-20; maximum gage height, 40.51 ft, Oct. 1; minimum daily discharge, 197 ft^3/s, June 20; minimum gage height, 36.28 ft, June 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2160	802	894	1130	941	775	434	369	223	290	447	482
2	2110	784	894	1100	947	789	422	369	216	297	453	482
3	2100	766	905	1090	947	798	410	358	216	300	453	485
4	2110	761	910	1060	953	789	407	348	213	300	453	482
5	2060	756	920	1040	964	770	410	340	213	290	453	482
6	1990	748	953	1030	964	743	401	335	225	285	447	475
7	1920	734	993	999	970	739	393	320	237	285	444	472
8	1850	712	1030	988	976	726	384	312	248	280	438	462
9	1780	699	1060	970	970	712	375	307	256	275	438	456
10	1710	678	1100	953	964	699	367	305	248	268	450	447
11	1630	665	1140	936	964	686	356	315	244	263	469	431
12	1560	652	1210	920	959	678	348	307	232	263	482	410
13	1480	635	1250	910	959	665	345	300	225	260	502	396
14	1430	627	1270	894	953	656	348	295	216	265	502	378
15	1370	610	1300	879	936	639	378	290	204	260	502	364
16	1300	602	1320	864	930	627	401	282	202	263	499	367
17	1250	590	1340	850	910	639	404	277	200	265	495	404
18	1210	582	1340	835	899	614	407	268	200	268	492	381
19	1170	574	1340	821	889	598	404	263	202	277	492	369
20	1130	562	1340	811	874	582	401	258	197	282	516	353
21	1100	558	1330	821	864	562	393	260	211	287	524	345
22	1060	570	1310	884	864	546	390	265	237	320	516	340
23	1030	761	1300	894	855	543	381	258	248	348	509	353
24	999	821	1270	899	835	539	378	253	253	364	502	350
25	953	845	1250	900	821	527	375	248	263	367	499	361
26	936	860	1240	910	811	516	369	241	263	367	502	356
27	910	869	1210	915	798	506	364	230	246	364	513	356
28	884	874	1190	920	784	492	358	230	237	381	509	369
29	855	879	1180	925	---	475	345	234	244	396	502	356
30	830	889	1160	925	---	462	350	234	268	401	495	345
31	821	---	1140	936	---	453	---	230	---	425	485	---
TOTAL	43698	21465	36089	29009	25501	19545	11498	8901	6887	9556	14983	12109
MEAN	1410	715	1164	936	911	630	383	287	230	308	483	404
MAX	2160	889	1340	1130	976	798	434	369	268	425	524	485
MIN	821	558	894	811	784	453	345	230	197	260	438	340
AC-FT	86670	42580	71580	57540	50580	38770	22810	17660	13660	18950	29720	24020

CAL YR 1988 TOTAL 317138 MEAN 866 MAX 2200 MIN 258 AC-FT 629000
WTR YR 1989 TOTAL 239241 MEAN 655 MAX 2160 MIN 197 AC-FT 474500

02312720 WITHLACOOCHEE RIVER AT WYSONG DAM AT CARLSON, FL--Continued

GAGE HEIGHT, IN FEET ABOVE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	40.48	38.08	38.36	38.86	38.69	38.52	37.93	37.50	36.40	36.87	37.77	37.90
2	40.41	38.05	38.36	38.83	38.70	38.56	37.90	37.49	36.36	36.92	37.79	37.90
3	40.38	38.01	38.38	38.81	38.71	38.59	37.87	37.43	36.34	36.94	37.80	37.91
4	40.38	38.00	38.39	38.77	38.72	38.58	37.86	37.38	36.31	36.95	37.80	37.90
5	40.30	37.99	38.42	38.74	38.74	38.55	37.88	37.33	36.30	36.93	37.80	37.90
6	40.20	37.98	38.48	38.72	38.75	38.50	37.86	37.29	36.33	36.92	37.78	37.88
7	40.10	37.95	38.55	38.68	38.76	38.50	37.84	37.22	36.36	36.94	37.77	37.87
8	39.99	37.90	38.62	38.66	38.78	38.47	37.82	37.17	36.40	36.93	37.75	37.85
9	39.88	37.87	38.67	38.64	38.77	38.45	37.80	37.13	36.43	36.92	37.75	37.83
10	39.78	37.83	38.73	38.61	38.77	38.43	37.78	37.11	36.41	36.91	37.79	37.80
11	39.66	37.80	38.81	38.58	38.77	38.41	37.75	37.13	36.40	36.90	37.85	37.75
12	39.55	37.77	38.92	38.56	38.77	38.40	37.73	37.08	36.37	36.92	37.89	37.68
13	39.43	37.74	38.97	38.54	38.77	38.38	37.71	37.04	36.35	36.92	37.95	37.63
14	39.33	37.72	39.01	38.52	38.76	38.37	37.71	37.00	36.33	36.95	37.95	37.57
15	39.22	37.68	39.05	38.49	38.74	38.34	37.80	36.96	36.29	36.95	37.95	37.52
16	39.12	37.66	39.08	38.47	38.73	38.32	37.86	36.92	36.29	36.97	37.94	37.53
17	39.03	37.64	39.11	38.44	38.70	38.35	37.86	36.88	36.30	37.00	37.93	37.66
18	38.95	37.62	39.11	38.42	38.68	38.30	37.85	36.82	36.31	37.02	37.92	37.58
19	38.87	37.60	39.12	38.39	38.67	38.27	37.82	36.79	36.34	37.07	37.92	37.54
20	38.80	37.58	39.12	38.37	38.65	38.24	37.80	36.75	36.33	37.11	37.99	37.48
21	38.72	37.57	39.11	38.40	38.64	38.20	37.75	36.75	36.40	37.14	38.02	37.45
22	38.65	37.60	39.09	38.53	38.65	38.17	37.72	36.75	36.53	37.29	38.00	37.43
23	38.58	38.05	39.07	38.56	38.64	38.17	37.68	36.70	36.59	37.41	37.98	37.48
24	38.51	38.19	39.05	38.57	38.61	38.17	37.65	36.67	36.63	37.48	37.96	37.47
25	38.41	38.24	39.02	38.58	38.59	38.15	37.62	36.63	36.68	37.50	37.95	37.51
26	38.37	38.27	39.00	38.60	38.58	38.12	37.59	36.58	36.69	37.50	37.96	37.50
27	38.30	38.29	38.97	38.62	38.55	38.10	37.55	36.52	36.64	37.49	37.99	37.50
28	38.25	38.31	38.94	38.63	38.53	38.07	37.51	36.50	36.61	37.55	37.98	37.55
29	38.19	38.32	38.93	38.64	---	38.03	37.45	36.50	36.66	37.60	37.96	37.50
30	38.16	38.34	38.90	38.65	---	38.00	37.45	36.49	36.77	37.62	37.94	37.46
31	38.12	---	38.88	38.67	---	37.98	---	36.45	---	37.70	37.91	---
MEAN	39.23	37.92	38.85	38.60	38.69	38.31	37.75	36.93	36.44	37.14	37.89	37.65
MAX	40.48	38.34	39.12	38.86	38.78	38.59	37.93	37.50	36.77	37.70	38.02	37.91
MIN	38.12	37.57	38.36	38.37	38.53	37.98	37.45	36.45	36.29	36.87	37.75	37.43

CAL YR 1988 MEAN 38.74 MAX 40.63 MIN 37.30
WTR YR 1989 MEAN 37.95 MAX 40.48 MIN 36.29

WITHLACOOCHEE RIVER BASIN

02312772 LESLIE-HEIFNER CANAL NEAR FLORAL CITY, FL

LOCATION.--Lat 28°45'12", long 82°13'49", in NW¼ sec.17, T.20 S., R.21 E., Citrus County, Hydrologic Unit 03100208, at upstream side of control structure, 50 ft upstream from bridge on Trail's End Road, 1.4 mi downstream from Withlacoochee River, and 4.1 mi east of Floral City.

DRAINAGE AREA.--Indeterminate.

PERIOD OF RECORD.--Occasional discharge measurements, water years 1964-72, 1982; October 1982 to September 1983 (discharge measurements only). October 1983 to November 1987 (discharge measurements and gage heights only); December 1987 to current year (discharge measurements only). Records of gage height prior to October 1984 and October to November 1987 are unpublished and available in files of the Orlando Subdistrict office.

GAGE.--Nonrecording gage. Datum of gage is National Geodetic Vertical Datum of 1929. Prior to Nov. 21, 1983, nonrecording gage at site 50 ft downstream at same datum. Nov. 21, 1983 to Nov. 17, 1987 water-stage recorder at present site and datum.

REMARKS.--Control structure is usually closed or full open. Discharge at station is a diversion from Withlacoochee River to Tsala Apopka Lake; flow occasionally reversed.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge measured, 227 ft^3/s, Apr. 2, 1987; maximum gage height recorded, 44.37 ft, Apr. 9,10, 1987; maximum reverse flow measured, 20 ft^3/s, Apr. 30, 1969; minimum gage height recorded, 37.54 ft, June 10, 1985.

DISCHARGE MEASUREMENTS, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND
DEC			JUL		
19...	1405	154	26...	1550	6.08
FEB			SEP		
15...	1120	42.4	25...	1455	30.4

WITHLACOOCHEE RIVER BASIN

02312786 THE CANAL (ORANGE STATE CANAL) NEAR FLORAL CITY, FL

LOCATION.--Lat 28°44'48", long 82°15'49", in SW¼ sec.13, T.20 S., R.20 E., Citrus County, Hydrologic Unit 03100208, at upstream side of control structure, 150 ft upstream from bridge on Trail's End Road, 1.1 mi upstream from Tsala Apopka Lake, 2.0 mi east of Floral City, and 2.4 mi downstream from Withlacoochee River

DRAINAGE AREA.--Indeterminate.

PERIOD OF RECORD.--Occasional discharge measurements, water years 1964-72, 1982; October 1982 to September 1983 (discharge measurements only); October 1983 to September 1985 (discharge measurements and gage heights only). October 1985 to current year (discharge measurements only).

GAGE.--Nonrecording gage. Datum of gage is National Geodetic Vertical Datum of 1929, levels by Southwest Florida Water Management District. Prior to Nov. 21, 1983, nonrecording gage at site 150 ft downstream. Nov. 21, 1983 to Nov. 18, 1985 water-stage recorder at upstream side of control structure. June 2, 1984 to Dec. 1, 1987 water-stage recorder at downstream side of control structure. Prior to Oct. 1, 1984, at datum 0.09 ft higher.

REMARKS.--Control structure is usually closed or full open. Discharge at station is a diversion from Withlacoochee River to Tsala Apopka Lake; flow occasionally reversed. Flow occasionally diverted through culvert 800 ft upstream. Periodic measurements of diversion are unpublished and available in files of the Orlando Subdistrict Office.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge measured 235 ft^3/s, Aug. 8, 1985; maximum daily gage height recorded, 43.04 ft, Sept. 1, 1985; maximum reverse flow measured, 12 ft^3/s, Apr. 30, 1969; minimum gage height recorded, 37.41 ft, May 26, 1985.

DISCHARGE MEASUREMENTS, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND
DEC			JUL		
19 ..	1058	174	31 ...	1102	6.90
FEB			SEP		
15...	0940	44.8	25.	1315	30.4
APR					
07 ..	1340	6.33			

02312975 TSALA APOPKA OUTFALL CANAL AT S-353, NEAR HERNANDO, FL

LOCATION.--Lat 28°57'19", long 82°20'13", in NE¼ sec.6, T.18 S., R.20 E., Citrus County, Hydrologic Unit 03100208, on left bank at control structure 353, on graded road 2.3 mi northeast of Hernando, and 2.8 mi upstream from mouth.

DRAINAGE AREA.--Indeterminate.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1968 to current year.

GAGE.--Dual water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (U.S. Army Corps of Engineers bench mark). Auxiliary gage at downstream side of control structure.

REMARKS.--Estimated daily discharges: Oct. 1 to Nov. 22, Nov. 24 to Mar. 3, Mar. 8 to Sept. 30, leakage through gates. Records good except for estimated daily discharges, which are poor. Flow regulated by manipulation of gates in spillway. Discharge computed from relation between discharge, head, and gate openings.

COOPERATION.--Gate-opening record provided by Southwest Florida Water Management District.

AVERAGE DISCHARGE.--21 years, 20.8 ft^3/s, 15,070 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 410 ft^3/s, Sept. 4, 1968; maximum gage height, 39.49 ft, Mar. 17, 1986; no flow for many days in some years; minimum gage height, 34.95 ft, June 12, 1985.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 164 ft^3/s, Mar. 4-7; maximum gage height, 38.75 ft, Mar. 3; minimum daily discharge, 0.05 ft^3/s, May 28 to July 26; minimum gage height, 37.37 ft, June 5,6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.40	.40	.10	.12	.15	.15	.25	.14	.05	.05	.07	.18
2	.40	.40	.10	.12	.15	.15	.24	.13	.05	.05	.08	.18
3	.40	40	.10	.12	.15	85	.24	.13	.05	.05	.08	.19
4	.40	.40	.10	.12	.15	164	.23	.13	.05	.05	.08	.19
5	.40	.40	.10	.12	.15	164	.23	.13	.05	.05	.09	.19
6	.40	.40	.10	.12	.15	164	.23	.12	.05	.05	.09	.20
7	.40	.40	.10	.12	.15	164	.22	.12	.05	.05	.09	.20
8	.40	.40	.10	.12	.15	79	.22	.12	.05	.05	.10	.20
9	.40	.40	.10	.12	.15	.25	.21	.11	.05	.05	.10	.21
10	.40	.40	.10	.12	.15	.25	.21	.11	.05	.05	.10	.21
11	.40	.40	.10	.13	.15	.25	.20	.11	.05	.05	.11	.21
12	.40	.40	.10	.13	.15	.25	.20	.10	.05	.05	.11	.22
13	.40	.40	.10	.13	.15	.25	.19	.10	.05	.05	.11	.22
14	.40	.40	.10	.13	.15	.25	.19	.10	.05	.05	.12	.22
15	.40	.40	.10	.13	.15	.25	.19	.09	.05	.05	.12	.23
16	.40	.40	.10	.13	.15	.25	.18	.09	.05	.05	.12	.23
17	.40	.40	.10	.13	.15	.25	.18	.09	.05	.05	.13	.23
18	.40	.40	.10	.13	.15	.25	.18	.08	.05	.05	.13	.24
19	.40	.40	.10	.13	.15	.25	.18	.08	.05	.05	.13	.24
20	.40	.40	.10	.13	.15	.25	.17	.08	.05	.05	.14	.24
21	.40	.40	.11	.14	.15	.25	.17	.08	.05	.05	.14	.25
22	.40	39	.11	.14	.15	.25	.17	.07	.05	.05	.14	.25
23	.40	72	.11	.14	.15	.25	.16	.07	.05	.05	.15	.25
24	.40	35	.11	.14	.15	.25	.16	.07	.05	.05	.15	.25
25	.40	.10	.11	.14	.15	.25	.16	.06	05	.05	.16	.25
26	.40	.10	.11	.14	.15	.25	.15	.06	.05	.05	.16	.25
27	.40	.10	.11	.14	.15	.25	.15	.06	.05	.06	.16	.25
28	.40	.10	.11	.14	.15	.25	.15	.05	.05	.06	.17	.25
29	.40	.10	.11	.14	---	.25	.14	.05	.05	.06	.17	.25
30	.40	.10	.11	.14	---	.25	.14	.05	.05	.07	.17	.25
31	.40	---	.12	.14	---	.25	---	.05	---	.07	.18	---
TOTAL	12.40	155.00	3.22	4.04	4.20	826.05	5.69	2.83	1.50	1.62	3.85	6.73
MEAN	.40	5.17	.10	.13	.15	26.6	.19	.091	.050	.052	.12	.22
MAX	.40	72	.12	.14	.15	164	.25	.14	.05	.07	.18	.25
MIN	.40	.10	.10	.12	.15	.15	.14	.05	.05	.05	.07	.18
AC-FT	25	307	6.4	8.0	8.3	1640	11	5.6	3.0	3.2	7.6	13

CAL YR 1988 TOTAL 10438.17 MEAN 28.5 MAX 330 MIN .05 AC-FT 20700
WTR YR 1989 TOTAL 1027.13 MEAN 2.81 MAX 164 MIN .05 AC-FT 2040

02312975 TSALA APOPKA OUTFALL CANAL AT S-353, NEAR HERNANDO, FL--Continued

GAGE HEIGHT, IN FEET ABOVE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	38.58	38.37	38.50	38.42	38.59	38.56	38.33	37.97	37.44	38.26	38.47	38.38
2	38.57	38.36	38.48	38.42	38.57	38.68	38.33	37.94	37.43	38.28	38.46	38.44
3	38.60	38.35	38.48	38.43	38.56	38.69	38.32	37.92	37.40	38.28	38.48	38.53
4	38.63	38.36	38.47	38.40	38.55	38.60	38.30	37.90	37.38	38.27	38.47	38.51
5	38.60	38.43	38.45	38.42	38.55	38.57	38.28	37.88	37.37	38.27	38.45	38.46
6	38.57	38.43	38.44	38.45	38.54	38.55	38.25	37.86	37.40	38.27	38.43	38.45
7	38.56	38.40	38.44	38.46	38.53	38.51	38.27	37.82	37.47	38.28	38.41	38.43
8	38.54	38.39	38.43	38.48	38.51	38.52	38.22	37.79	37.52	38.27	38.40	38.42
9	38.53	38.38	38.43	38.50	38.47	38.58	38.20	37.78	37.53	38.25	38.39	38.40
10	38.52	38.36	38.41	38.50	38.45	38.58	38.18	37.80	37.48	38.23	38.39	38.40
11	38.52	38.35	38.43	38.52	38.45	38.60	38.13	37.82	37.45	38.21	38.38	38.38
12	38.51	38.34	38.45	38.54	38.43	38.61	38.11	37.81	37.44	38.20	38.38	38.36
13	38.49	38.32	38.47	38.56	38.43	38.59	38.10	37.78	37.45	38.18	38.39	38.34
14	38.49	38.32	38.47	38.55	38.42	38.58	38.11	37.76	37.42	38.17	38.38	38.32
15	38.50	38.30	38.47	38.55	38.41	38.56	38.17	37.75	37.40	38.15	38.38	38.30
16	38.50	38.30	38.46	38.55	38.41	38.55	38.18	37.72	37.48	38.12	38.36	38.28
17	38.52	38.28	38.47	38.53	38.40	38.55	38.16	37.69	37.69	38.13	38.34	38.28
18	38.53	38.27	38.45	38.52	38.42	38.55	38.14	37.66	37.68	38.15	38.30	38.28
19	38.54	38.26	38.45	38.50	38.44	38.53	38.13	37.64	37.67	38.16	38.30	38.27
20	38.56	38.26	38.44	38.49	38.48	38.52	38.11	37.63	37.71	38.17	38.32	38.26
21	38.54	38.23	38.43	38.50	38.55	38.52	38.07	37.61	37.82	38.21	38.31	38.25
22	38.52	38.20	38.42	38.57	38.62	38.49	38.06	37.59	37.92	38.35	38.30	38.30
23	38.50	38.34	38.41	38.60	38.59	38.52	38.05	37.57	38.03	38.34	38.28	38.40
24	38.49	38.40	38.42	38.62	38.57	38.51	38.03	37.54	38.12	38.34	38.26	38.42
25	38.46	38.48	38.42	38.62	38.56	38.49	38.01	37.52	38.20	38.34	38.24	38.44
26	38.44	38.52	38.40	38.63	38.55	38.48	37.98	37.48	38.18	38.34	38.22	38.45
27	38.43	38.54	38.40	38.63	38.56	38.46	37.96	37.46	38.16	38.33	38.38	38.44
28	38.42	38.55	38.42	38.62	38.55	38.45	37.94	37.45	38.15	38.32	38.35	38.43
29	38.41	38.52	38.41	38.61	---	38.43	37.92	37.47	38.16	38.30	38.34	38.42
30	38.40	38.50	38.40	38.61	---	38.44	37.93	37.47	38.24	38.30	38.32	38.42
31	38.38	---	38.41	38.60	---	38.40	---	37.46	---	38.46	38.35	---
MEAN	38.51	38.37	38.44	38.53	38.51	38.54	38.13	37.69	37.69	38.26	38.36	38.38
MAX	38.63	38.55	38.50	38.63	38.62	38.69	38.33	37.97	38.24	38.46	38.48	38.53
MIN	38.38	38.20	38.40	38.40	38.40	38.40	37.92	37.45	37.37	38.12	38.22	38.25

CAL YR 1988 MEAN 38.19 MAX 38.76 MIN 37.18
WTR YR 1989 MEAN 38.28 MAX 38.69 MIN 37.37

02312975 TSALA APOPKA OUTFALL CANAL AT S-353, NEAR HERNANDO, FL--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1946, 1969 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	OXYGEN, DIS-SOLVED (MG/L) (00300)	NITRO-GEN, NITRITE TOTAL (MG/L AS N) (00615)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS-PHOROUS TOTAL (MG/L AS P) (00665)	PHOS-PHORUS, ORTHO, TOTAL (MG/L AS P) (70507)
OCT												
20...	1755	0.40	130	7.9	26.5	11.7	<0.010	<0.020	<0.010	0.78	<0.020	<0.010
DEC												
16...	1530	0.10	108	7.6	16.0	--	<0.010	<0.020	0.010	0.80	<0.020	0.010
APR												
12...	1900	0.20	115	8.6	21.5	8.6	<0.010	0.020	<0.010	0.69	<0.020	<0.010
SEP												
22...	1240	0.25	117	7.9	28.5	--	<0.010	0.070	<0.010	0.87	<0.020	<0.010

DATE	COLOR (PLAT-INUM-COBALT UNITS) (00080)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY LAB (MG/L AS CACO3) (90410)
APR							
12...	30	43	15	1.3	6.0	<0.10	36
SEP							
22...	30	38	13	1.3	5.7	0.10	34

DATE	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	STRON-TIUM, DIS-SOLVED (UG/L AS SR) (01080)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
APR							
12...	0.70	11	<0.10	0.20	83	100	10
SEP							
22...	2.0	11	<0.10	0.30	74	80	11

WITHLACOOCHEE RIVER BASIN

02312976 TSALA APOPKA OUTFALL CANAL BELOW S-353, NEAR HERNANDO, FL

LOCATION.--Lat 28°57'19", long 82°20'13", in NE¼ sec.6, T.18 S., R.20 E., Citrus County, Hydrologic Unit 03100208, on left bank at control structure 353, on graded road 2.3 mi northeast of Hernando, and 2.8 mi upstream from mouth.

DRAINAGE AREA.--Indeterminate.

PERIOD OF RECORD.--July 1968 to current year (gage heights only).

GAGE.--Dual water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (U.S. Army Corps of Engineers bench mark).

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 37.02 ft, Oct. 14, 1979; minimum, 27.68 ft, June 5, 1985.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 35.60 ft. Oct. 1; minimum, 28.15 ft, June 4.

GAGE HEIGHT, IN FEET ABOVE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	35.60	31.19	30.94	31.85	30.95	30.41	29.03	28.88	28.39	29.25	29.29	29.10
2	35.58	31.09	30.96	31.78	30.95	30.76	28.94	28.91	28.30	29.28	29.29	29.06
3	35.56	30.98	30.99	31.71	30.92	30.94	28.91	28.84	28.22	29.24	29.29	29.25
4	35.58	30.90	31.05	31.63	30.89	31.09	28.89	28.76	28.17	29.19	29.28	29.15
5	35.56	30.88	31.14	31.53	30.87	30.97	28.92	28.71	28.18	29.12	29.19	29.05
6	35.43	30.88	31.25	31.45	30.86	30.88	28.91	28.68	28.35	29.12	29.10	28.98
7	35.31	30.79	31.36	31.38	30.87	30.79	28.89	28.64	28.53	29.29	29.03	28.91
8	35.17	30.72	31.46	31.33	30.88	30.50	28.86	28.57	28.62	29.11	28.99	28.85
9	35.02	30.64	31.57	31.26	30.86	30.13	28.83	28.51	28.58	28.99	29.00	28.79
10	34.87	30.58	31.65	31.20	30.81	30.08	28.80	28.55	28.38	28.92	29.10	28.79
11	34.70	30.52	31.77	31.14	30.77	30.05	28.78	28.70	28.25	28.86	29.10	28.80
12	34.52	30.45	31.96	31.07	30.75	30.06	28.75	28.66	28.24	28.85	29.14	28.80
13	34.32	30.39	32.07	31.02	30.73	30.05	28.73	28.62	28.26	28.82	29.30	28.81
14	34.11	30.32	32.14	30.97	30.74	30.02	28.72	28.63	28.30	28.80	29.25	28.82
15	33.91	30.22	32.22	30.93	30.73	29.97	28.89	28.66	28.33	28.76	29.16	28.84
16	33.72	30.13	32.32	30.89	30.69	29.93	28.99	28.65	28.50	28.73	29.07	28.92
17	33.54	30.06	32.35	30.83	30.63	30.01	28.95	28.65	28.78	28.75	28.99	29.09
18	33.34	29.98	32.35	30.77	30.55	29.98	28.91	28.62	28.57	28.81	28.90	29.23
19	33.14	29.91	32.35	30.70	30.49	29.89	28.88	28.52	28.46	28.86	28.88	29.29
20	32.95	29.87	32.36	30.65	30.46	29.78	28.83	28.47	28.65	28.91	28.92	29.20
21	32.76	29.84	32.37	30.73	30.47	29.70	28.78	28.42	28.87	28.87	29.00	29.13
22	32.58	29.97	32.36	30.93	30.66	29.59	28.74	28.48	28.88	29.06	29.02	29.15
23	32.40	30.75	32.33	30.95	30.60	29.56	28.71	28.52	29.59	29.29	29.02	29.46
24	32.25	30.72	32.30	30.92	30.43	29.56	28.70	28.52	29.36	29.37	28.97	29.49
25	32.19	30.65	32.25	30.90	30.33	29.46	28.71	28.52	29.43	29.35	28.93	29.68
26	31.91	30.74	32.18	30.88	30.28	29.38	28.72	28.58	29.00	29.27	28.98	29.66
27	31.78	30.84	32.11	30.88	30.28	29.32	28.73	28.62	28.81	29.15	29.12	29.56
28	31.64	30.98	32.04	30.90	30.30	29.27	28.74	28.63	28.76	29.02	29.03	29.52
29	31.50	30.94	31.99	30.93	---	29.21	28.73	28.55	28.36	28.97	28.95	29.48
30	31.38	30.92	31.97	30.95	---	29.17	28.75	28.52	29.20	29.03	28.87	29.39
31	31.27	---	31.91	30.95	---	29.13	---	28.46	---	29.26	28.84	---
MEAN	33.66	30.56	31.87	31.10	30.67	29.99	28.82	28.61	28.63	29.04	29.06	29.14
MAX	35.60	31.19	32.37	31.85	30.95	31.09	29.03	28.91	29.59	29.37	29.30	29.68
MIN	31.27	29.84	30.94	30.65	30.28	29.13	28.70	28.42	28.17	28.73	28.84	28.79

CAL YR 1988 MEAN 30.93 MAX 35.60 MIN 28.69
WTR YR 1989 MEAN 30.10 MAX 35.60 MIN 28.17

WITHLACOOCHEE RIVER BASIN

02313000 WITHLACOOCHEE RIVER NEAR HOLDER, FL
(National stream-quality accounting network station)

LOCATION.--Lat 28°59'19", long 82°20'59", in NW¼ sec.30, T.17 S., R.20 E., Marion County, Hydrologic Unit 03100208, near right bank on downstream side of bridge on State Highway 200, 4.5 mi northeast of Holder, and 38 mi upstream from mouth.

DRAINAGE AREA.--1,825 mi^2, approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1928 to February 1929, August 1931 to current year.

REVISED RECORDS.--WDR-FL-72-3: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 27.52 ft above National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers). Aug. 14, 1928, to Feb. 15, 1929, nonrecording gage at present site at datum 2.00 ft higher. Aug. 29, 1931, to May 19, 1961, water-stage recorder at site 100 ft downstream at present datum.

REMARKS.--Records good. High-water diversion in headwaters (station 02311000).

AVERAGE DISCHARGE.--58 years (water years 1932-89), 1,073 ft^3/s, 7.98 in/yr, 777,400 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,660 ft^3/s, Apr. 5, 1960, gage height, 13.28 ft; minimum, 95 ft^3/s, June 4,5, 1985; minimum gage height, -0.41 ft, June 19, 1945.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,950 ft^3/s, Oct. 1, gage height, 8.16 ft, occurred on recession following peak of Sept. 29,30, 1988; maximum peak discharge 1,610 ft^3/s, Dec. 21,22, gage height, 4.94 ft; minimum 269 ft^3/s, June 4,5, gage height, 0.78 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2940	1130	1080	1400	1110	938	523	470	334	565	554	451
2	2920	1100	1090	1370	1100	1040	500	479	308	569	553	439
3	2920	1070	1100	1340	1100	1080	491	457	288	559	550	491
4	2920	1040	1120	1320	1090	1110	486	439	273	545	545	458
5	2890	1040	1150	1290	1080	1080	491	428	277	522	517	426
6	2840	1040	1180	1270	1080	1050	488	412	317	528	490	407
7	2770	1010	1220	1240	1080	1020	482	399	365	572	468	388
8	2690	992	1250	1220	1080	947	475	385	389	520	456	366
9	2610	974	1280	1200	1080	848	467	378	380	486	458	350
10	2540	955	1310	1190	1060	832	458	378	326	467	481	347
11	2460	940	1350	1170	1050	827	445	415	292	447	481	350
12	2370	925	1420	1150	1040	830	437	406	287	443	489	349
13	2280	906	1470	1130	1040	827	433	394	293	433	534	350
14	2190	881	1500	1120	1040	819	434	399	302	430	518	353
15	2100	855	1540	1100	1040	805	477	402	310	419	493	356
16	2040	829	1570	1090	1030	792	505	403	354	409	466	379
17	1960	808	1590	1070	1010	815	497	404	430	415	440	419
18	1880	783	1590	1050	985	807	485	396	373	430	417	457
19	1810	761	1590	1030	969	779	475	371	343	448	408	473
20	1740	751	1600	1020	962	748	461	350	400	459	420	447
21	1660	742	1600	1040	966	723	443	337	459	449	440	422
22	1600	780	1600	1100	1010	693	434	347	461	503	444	430
23	1530	1000	1590	1100	994	683	427	355	665	570	440	522
24	1460	1000	1580	1100	954	681	426	358	603	592	428	530
25	1410	991	1560	1090	921	655	427	358	618	584	415	584
26	1340	1020	1530	1090	902	631	429	344	497	554	428	578
27	1300	1050	1500	1090	903	607	432	333	436	520	462	545
28	1260	1090	1480	1090	907	591	434	332	424	482	436	533
29	1230	1080	1450	1100	---	576	430	375	480	465	412	525
30	1190	1080	1450	1100	---	563	435	363	553	479	389	499
31	1160	---	1420	1110	---	552	---	351	---	548	380	---
TOTAL	64010	28623	43760	35780	28583	24949	13827	12018	11837	15412	14412	13224
MEAN	2065	954	1412	1154	1021	805	461	388	395	497	465	441
MAX	2940	1130	1600	1400	1110	1110	523	479	665	592	554	584
MIN	1160	742	1080	1020	902	552	426	332	273	409	380	347
AC-FT	127000	56770	86800	70970	56690	49490	27430	23840	23480	30570	28590	26230
CFSM	1.13	.52	.77	.63	.56	.44	.25	.21	.22	.27	.25	.24
IN.	1.30	.58	.89	.73	.58	.51	.28	.24	.24	.31	.29	.27

CAL YR 1988 TOTAL 405440 MEAN 1108 MAX 2940 MIN 411 AC-FT 804200 CFSM .61 IN. 8.26
WTR YR 1989 TOTAL 306435 MEAN 840 MAX 2940 MIN 273 AC-FT 607800 CFSM .46 IN. 6.25

02313000 WITHLACOOCHEE RIVER NEAR HOLDER, FL--Continued

GAGE HEIGHT, IN FEET ABOVE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.13	3.74	3.49	4.43	3.53	2.99	1.63	1.48	1.01	1.85	1.88	1.70
2	8.10	3.64	3.51	4.36	3.53	3.35	1.55	1.51	.92	1.88	1.88	1.66
3	8.09	3.54	3.54	4.23	3.51	3.48	1.52	1.43	.85	1.84	1.88	1.85
4	8.10	3.45	3.60	4.20	3.47	3.58	1.50	1.37	.80	1.79	1.87	1.74
5	8.04	3.44	3.68	4.11	3.44	3.47	1.52	1.33	.81	1.71	1.78	1.63
6	7.96	3.43	3.80	4.04	3.44	3.36	1.51	1.27	.95	1.73	1.69	1.57
7	7.82	3.34	3.92	3.97	3.45	3.27	1.50	1.22	1.13	1.89	1.62	1.50
8	7.68	3.27	4.03	3.90	3.46	3.03	1.47	1.17	1.22	1.71	1.58	1.43
9	7.52	3.20	4.13	3.84	3.43	2.70	1.45	1.14	1.18	1.59	1.59	1.38
10	7.36	3.13	4.21	3.78	3.39	2.65	1.41	1.15	.99	1.53	1.68	1.37
11	7.21	3.08	4.34	3.71	3.35	2.63	1.37	1.29	.86	1.46	1.68	1.39
12	7.03	3.03	4.52	3.65	3.33	2.64	1.34	1.26	.85	1.45	1.72	1.39
13	6.84	2.96	4.63	3.60	3.33	2.63	1.32	1.21	.88	1.41	1.88	1.40
14	6.64	2.88	4.71	3.55	3.33	2.61	1.33	1.23	.91	1.40	1.83	1.42
15	6.44	2.78	4.80	3.50	3.32	2.56	1.48	1.24	.94	1.36	1.75	1.43
16	6.26	2.70	4.88	3.46	3.28	2.52	1.58	1.25	1.10	1.33	1.66	1.52
17	6.08	2.62	4.92	3.40	3.22	2.60	1.55	1.25	1.38	1.35	1.58	1.67
18	5.88	2.53	4.92	3.34	3.14	2.58	1.52	1.22	1.17	1.40	1.50	1.81
19	5.70	2.46	4.92	3.28	3.08	2.48	1.48	1.13	1.06	1.47	1.47	1.87
20	5.51	2.42	4.92	3.23	3.06	2.38	1.43	1.05	1.27	1.51	1.52	1.79
21	5.31	2.39	4.93	3.29	3.08	2.29	1.37	1.01	1.48	1.48	1.60	1.70
22	5.14	2.51	4.93	3.49	3.24	2.19	1.34	1.05	1.49	1.67	1.62	1.73
23	4.96	3.25	4.90	3.51	3.18	2.16	1.31	1.08	2.19	1.90	1.61	2.06
24	4.80	3.24	4.87	3.49	3.04	2.15	1.31	1.09	1.98	1.97	1.57	2.10
25	4.65	3.20	4.82	3.47	2.93	2.06	1.31	1.09	2.03	1.94	1.53	2.28
26	4.48	3.29	4.76	3.46	2.87	1.98	1.32	1.04	1.62	1.85	1.58	2.27
27	4.33	3.39	4.70	3.46	2.87	1.91	1.33	1.00	1.40	1.74	1.71	2.16
28	4.20	3.53	4.63	3.47	2.89	1.86	1.34	1.00	1.36	1.61	1.62	2.12
29	4.08	3.49	4.57	3.50	---	1.81	1.33	1.15	1.56	1.56	1.54	2.09
30	3.96	3.47	4.56	3.52	---	1.76	1.35	1.11	1.81	1.61	1.46	1.99
31	3.85	---	4.50	3.53	---	1.73	---	1.07	---	1.85	1.43	---
MEAN	6.20	3.11	4.44	3.67	3.26	2.56	1.43	1.19	1.24	1.64	1.66	1.73
MAX	8.13	3.74	4.93	4.43	3.53	3.58	1.63	1.51	2.19	1.97	1.88	2.28
MIN	3.85	2.39	3.49	3.23	2.87	1.73	1.31	1.00	.80	1.33	1.43	1.37

CAL YR 1988 MEAN 3.48 MAX 8.13 MIN 1.27
WTR YR 1989 MEAN 2.68 MAX 8.13 MIN .80

02313000 WITHLACOOCHEE RIVER NEAR HOLDER, FL--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1950-52, 1954 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: January 1950 to December 1951, October 1962 to September 1983, March 1987 to current year.
WATER TEMPERATURE: January 1950 to December 1951, October 1962 to September 1983, March 1987 to current year.

INSTRUMENTATION.--Water-quality monitor since February 1987. Digital recorder set for 60-minute punch interval.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum observed, 770 microsiemens, Sept. 12, 1979; minimum observed, 114 microsiemens Oct. 10, 1979.
WATER TEMPERATURE: Maximum observed, 33.0°C, July 17, 1950; minimum observed, 5.0°C, Jan. 10, 1970, Jan. 19, 1977.

EXTREMES OUTSIDE PERIOD OF DAILY RECORD.--A specific conductance of 102 microsiemens was observed on Apr. 6, 1960.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily mean, 447 microsiemens, Aug. 16; minimum daily mean, 156 microsiemens, Oct. 1.
WATER TEMPERATURE: Maximum daily mean, 30.4°C, July 10,11; minimum daily mean, 11.5°C, Dec. 19.

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	156	285	308	223	248	241	---	287	300	351	325	433
2	160	287	302	225	242	238	---	287	303	342	320	422
3	164	290	292	226	235	241	---	288	305	329	318	425
4	167	294	278	229	230	247	---	285	304	319	319	441
5	173	297	262	230	226	253	---	285	301	324	315	---
6	178	296	247	230	224	256	---	285	293	331	315	---
7	183	301	233	232	221	257	---	285	296	344	318	---
8	190	304	219	235	218	260	---	286	299	364	316	---
9	196	307	208	238	215	262	---	287	299	358	317	---
10	203	310	199	240	213	263	---	288	297	344	388	---
11	210	314	190	241	212	262	---	283	296	335	387	---
12	217	316	183	244	209	263	---	282	295	327	317	---
13	224	318	181	246	209	266	284	284	295	324	315	---
14	230	319	180	249	210	269	284	287	295	321	360	---
15	236	320	179	248	212	270	282	288	295	320	432	---
16	241	321	180	250	215	270	283	289	290	318	447	---
17	246	322	183	251	217	266	284	290	291	315	431	---
18	250	324	186	253	219	265	283	292	302	310	389	---
19	256	325	188	256	220	268	285	293	303	305	382	---
20	256	325	188	259	222	271	287	293	301	299	363	---
21	259	326	191	254	224	274	286	294	304	298	365	---
22	261	323	194	248	223	277	287	294	328	295	387	---
23	263	307	198	250	228	275	290	292	323	301	398	---
24	265	305	202	255	229	276	291	291	343	314	394	---
25	267	308	206	259	231	274	290	292	332	314	392	---
26	270	319	209	263	235	275	289	293	324	314	408	---
27	273	323	211	265	235	277	289	294	313	314	401	326
28	275	315	214	265	239	279	290	295	311	318	392	---
29	278	313	216	263	---	281	291	290	316	325	---	---
30	281	311	217	261	---	283	290	291	343	331	---	---
31	284	---	220	255	---	284	---	298	---	329	---	---
MEAN	229	311	215	247	224	266	---	289	307	324	---	---
MAX	284	326	308	265	248	284	---	298	343	364	---	---
MIN	156	285	179	223	209	238	---	282	290	295	---	---

02313000 WITHLACOOCHEE RIVER NEAR HOLDER, FL--Continued

TEMPERATURE, (DEG C), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25.8	22.4	18.1	20.6	20.9	17.8	24.0	26.2	29.4	28.1	29.8	28.9
2	25.5	21.0	16.5	20.4	21.1	18.1	22.8	26.1	29.7	28.3	27.7	28.5
3	25.1	20.3	15.5	21.2	21.5	18.7	22.9	26.1	29.9	28.9	24.7	28.7
4	24.8	21.3	15.4	20.2	21.7	20.3	23.4	26.1	29.6	29.4	27.9	28.7
5	24.1	22.3	15.6	17.8	21.8	21.6	23.8	26.4	29.6	29.6	27.1	28.4
6	23.7	21.6	16.0	17.5	22.1	22.2	23.6	26.8	28.3	29.5	29.9	28.6
7	23.8	20.7	16.6	18.2	22.5	20.7	22.9	26.4	26.7	28.8	30.0	28.6
8	22.5	20.0	17.1	19.0	22.5	18.3	22.3	23.9	26.1	29.8	30.0	28.7
9	21.8	20.0	17.5	19.6	20.3	16.0	23.2	25.5	27.2	30.1	29.1	28.5
10	21.6	20.5	18.1	19.8	17.7	15.4	24.2	25.8	28.5	30.4	28.3	28.5
11	21.3	21.1	17.7	19.8	16.3	15.8	22.2	25.3	29.1	30.4	28.0	28.4
12	21.4	21.7	16.5	20.2	16.0	16.8	20.1	24.9	29.1	29.9	26.4	28.6
13	21.1	22.1	14.7	20.8	16.6	18.0	21.1	24.6	29.1	29.8	27.1	28.4
14	20.4	22.3	13.6	21.1	18.3	19.7	22.0	25.5	29.8	29.6	28.0	28.5
15	20.3	22.2	14.2	21.0	19.7	20.6	22.2	26.2	30.0	29.7	28.5	28.6
16	20.6	22.4	14.9	21.5	20.7	21.1	22.3	26.8	29.1	30.0	28.6	28.7
17	21.0	23.0	14.0	20.4	21.1	21.9	23.5	27.4	27.7	29.5	28.5	28.3
18	21.4	23.6	12.4	19.0	20.2	22.5	24.0	27.6	28.4	28.7	29.0	27.7
19	22.0	24.0	11.5	18.6	19.1	23.2	22.4	26.9	28.4	28.2	28.7	27.3
20	22.4	24.1	12.2	18.7	19.4	23.6	25.7	26.9	28.5	28.4	28.2	27.4
21	22.8	24.0	13.9	18.4	20.6	23.9	25.1	27.6	27.8	28.8	28.3	27.4
22	22.7	23.2	15.2	16.8	20.8	24.0	24.4	27.7	27.5	28.4	29.3	26.9
23	21.6	22.2	16.3	15.6	18.0	23.5	21.2	27.9	26.9	28.1	29.7	26.0
24	21.3	20.9	16.9	16.0	14.4	22.8	22.1	27.9	26.8	27.8	30.1	25.9
25	21.4	19.9	17.4	16.8	13.2	22.6	25.3	28.2	27.3	27.9	30.3	25.7
26	20.5	20.1	17.9	17.7	13.3	22.7	25.8	28.7	28.8	28.7	29.6	25.8
27	21.0	21.1	17.8	18.5	14.8	24.0	26.3	29.1	29.6	28.9	29.2	26.6
28	21.7	21.6	18.7	19.0	16.4	24.8	26.5	29.7	29.9	29.3	29.4	27.2
29	22.4	18.9	19.6	19.6	---	25.1	26.8	29.1	28.9	29.6	29.6	27.6
30	22.6	18.4	19.9	20.5	---	25.1	26.7	29.1	28.3	29.8	29.8	27.9
31	22.6	---	20.1	21.0	---	25.2	---	29.2	---	29.8	30.0	---
MEAN	22.3	21.6	16.2	19.2	19.0	21.2	23.6	27.0	28.5	29.2	28.7	27.8
MAX	25.8	24.1	20.1	21.5	22.5	25.2	26.8	29.7	30.0	30.4	30.3	28.9
MIN	20.3	18.4	11.5	15.6	13.2	15.4	20.1	23.9	26.1	27.8	24.7	25.7

02313000 WITHLACOOCHEE RIVER NEAR HOLDER, FL--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	GAGE HEIGHT (FEET) (00065)	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	OXYGEN, DIS-SOLVED (MG/L) (00300)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)
DEC 07...	0950	3.91	1220	245	7.6	15.0	--	55	110	110
APR 12...	1322	1.34	437	277	7.8	20.0	6.3	E14	E14	130
JUN 05...	1520	0.82	280	291	7.9	29.5	5.8	E15	110	140
JUL 13...	0950	1.42	436	309	7.7	29.0	4.4	18	<1	150

DATE	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)
DEC 07...	37	3.2	5.0	0.80	87	19	9.9	0.10	5.5	168
APR 12...	45	4.4	5.5	0.40	109	16	9.6	0.10	3.6	170
JUN 05...	47	4.7	5.9	0.40	119	22	9.4	0.10	7.2	163
JUL 13...	50	5.1	5.7	0.30	105	38	8.5	0.10	8.1	175

DATE	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS-PHOROUS TOTAL (MG/L AS P) (00665)	PHOS-PHOROUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHOROUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)	SEDI-MENT, SUS-PENDED (MG/L) (80154)
DEC 07...	<0.010	<0.100	<0.010	<0.010	0.60	0.030	0.020	0.020	100	2
APR 12...	<0.010	0.190	0.020	0.020	0.50	0.030	0.020	0.020	67	6
JUN 05...	<0.010	0.210	0.060	0.040	0.50	0.030	0.030	0.020	--	--
JUL 13...	<0.010	0.120	0.040	0.020	0.40	0.040	0.010	0.020	--	--

DATE	ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106)	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)	BARIUM, DIS-SOLVED (UG/L AS BA) (01005)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE) (01010)	CADMIUM DIS-SOLVED (UG/L AS CD) (01025)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR) (01030)	COBALT, DIS-SOLVED (UG/L AS CO) (01035)	COPPER, DIS-SOLVED (UG/L AS CU) (01040)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)	LITHIUM DIS-SOLVED (UG/L AS LI) (01130)
JUN 05...	10	<1	6	<0.5	<1	<1	<3	1	3	4
JUL 13...	10	1	7	<0.5	<1	<1	<3	4	<1	<4

DATE	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	MERCURY DIS-SOLVED (UG/L AS HG) (71890)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO) (01060)	NICKEL, DIS-SOLVED (UG/L AS NI) (01065)	SELE-NIUM, DIS-SOLVED (UG/L AS SE) (01145)	SILVER, DIS-SOLVED (UG/L AS AG) (01075)	STRON-TIUM, DIS-SOLVED (UG/L AS SR) (01080)	VANA-DIUM, DIS-SOLVED (UG/L AS V) (01085)	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)
JUN 05...	8	<0.1	<10	<1	<1	<1.0	270	<6	15
JUL 13...	8	<0.1	<10	<1	<1	<1.0	340	<6	19

WITHLACOOCHEE RIVER BASIN

02313100 RAINBOW SPRINGS NEAR DUNNELLON, FL

LOCATION.--Lat 29°06'08", long 82°26'16", in SE¼ sec.12, T.16 S., R.18 E., Marion County, Hydrologic Unit 03100208, at head of springs, 3.9 mi north of Dunnellon, and 5.7 mi upstream from mouth.

DRAINAGE AREA.--Indeterminate.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--1899, 1905, 1907, 1917, 1929-30 (one discharge measurement each water year), October 1930 to November 1964 (discharge measurements only), December 1964 to current year. Prior to October 1940, published as Blue Springs near Dunnellon.

GAGE.--Nonrecording gage. Datum of gage is 28.34 ft above National Geodetic Vertical Datum of 1929 (U.S. Army Corps of Engineers bench mark). Prior to Nov. 19, 1948, at datum 1.63 ft higher. No gage prior to Oct. 8, 1930. July 22, 1931 to Apr. 1, 1933, water-stage recorder at present site. (April 1933 to March 1969, and since April 1971, nonrecording gage read at time of discharge measurements only.)

REMARKS.--Records good. Discharge measurements made at bridge on State Highway 484, 5 mi downstream from head of springs; surface inflow between springs and measuring site is negligible except after heavy rains. Discharge computed from relation between artesian pressure at Rainbow Springs well and discharge at measuring site. Artesian pressures are published as water levels for Rainbow Springs Well (290514082270701) in WDR FL-88-1B.

AVERAGE DISCHARGE.--24 years (water years 1966-89), 728 ft^3/s, 527,400 acre-ft/yr, 471 mgd.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge measured, 1,230 ft^3/s, Oct. 12, 1964, gage height, 4.10 ft; maximum gage height observed, 5.90 ft, Apr. 5, 1960; minimum discharge measured, 487 ft^3/s, Oct. 3, 1932, Apr. 4, 1957; minimum gage height observed, 1.50 ft, July 20, Sept. 14, 1962.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 1,010 ft^3/s, Oct. 1-2, stage falling, peak occurred Sept. 19-26, 1988, maximum daily discharge for event during year, 709 ft^3/s, Mar. 3; maximum gage height observed, 3.20 ft, Oct. 18; minimum discharge, 622 ft^3/s, June 16-19; minimum gage height observed, 2.18 ft, May 31, Sept. 27.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1010	887	822	780	737	702	677	655	632	640	644	633
2	1010	883	821	778	736	707	675	656	631	640	644	634
3	1000	880	819	776	735	709	674	654	630	641	646	634
4	998	880	818	773	733	708	672	652	629	643	646	635
5	992	878	812	771	731	706	672	650	627	643	644	635
6	986	874	810	770	729	705	672	649	626	643	643	635
7	980	869	810	768	727	703	672	648	626	643	641	636
8	975	865	809	766	726	701	673	645	628	643	639	636
9	972	863	809	765	723	699	673	644	631	643	639	635
10	967	861	809	763	723	698	671	644	632	643	641	634
11	963	860	809	762	723	697	669	643	628	643	641	634
12	958	858	809	761	722	697	669	643	625	643	642	631
13	953	855	808	759	719	697	668	643	624	643	643	630
14	947	852	806	757	717	697	667	643	623	643	643	630
15	942	848	805	756	715	696	667	643	623	643	643	630
16	940	844	804	754	714	695	667	643	623	643	641	629
17	936	842	803	753	713	694	667	643	622	643	639	630
18	933	840	802	751	713	694	667	642	622	643	636	631
19	930	835	801	750	712	694	667	641	623	643	636	632
20	926	832	799	749	710	692	666	641	625	643	636	632
21	922	830	796	749	710	690	665	639	625	643	636	632
22	919	829	794	749	710	689	663	637	627	643	636	630
23	916	830	793	748	710	688	661	635	629	643	636	632
24	913	830	793	747	710	688	659	634	630	643	637	632
25	908	830	792	744	708	686	657	634	630	649	636	635
26	903	830	789	742	706	685	656	634	632	651	636	637
27	901	828	787	741	705	682	656	634	636	649	636	638
28	897	827	786	740	703	682	656	634	636	647	636	638
29	894	826	783	739	---	680	655	632	636	644	636	638
30	891	824	782	739	---	679	654	633	638	643	634	638
31	890	---	781	738	---	679	---	632	---	643	633	---
TOTAL	29272	25490	24861	23438	20120	21519	19987	19900	18849	19950	19819	19006
MEAN	944	850	802	756	719	694	666	642	628	644	639	634
MAX	1010	887	822	780	737	709	677	656	638	651	646	638
MIN	890	824	781	738	703	679	654	632	622	640	633	629
AC-FT	58060	50560	49310	46490	39910	42680	39640	39470	37390	39570	39310	37700

CAL YR 1988 TOTAL 284112 MEAN 776 MAX 1060 MIN 688 AC-FT 563500
WTR YR 1989 TOTAL 262211 MEAN 718 MAX 1010 MIN 622 AC-FT 520100

PEACE, WITHLACOOCHEE, HILLSBOROUGH RIVERS AND WESTERN COASTAL AREA

WITHLACOOCHEE RIVER BASIN

02313100 RAINBOW SPRINGS NEAR DUNNELLON, FL--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1956, 1961, 1963 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	COLOR (PLAT-INUM-COBALT UNITS) (00080)	OXYGEN, DIS-SOLVED (MG/L) (00300)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)
APR										
13...	1300	664	206	7.2	23.0	<5	5.9	96	32	3.9
SEP										
27...	1650	635	202	8.2	23.0	<5	--	100	34	4.2

DATE	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	NITRO-GEN, NITRITE TOTAL (MG/L AS N) (00615)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)
APR										
13...	2.5	0.10	89	2.5	3.9	0.10	5.8	108	<0.010	1.00
SEP										
27...	2.8	0.10	93	4.2	4.5	0.20	6.0	117	<0.010	1.00

DATE	NITRO-GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS-PHOROUS TOTAL (MG/L AS P) (00665)	PHOS-PHORUS, ORTHO, TOTAL (MG/L AS P) (70507)	ALUM-INUM, TOTAL RECOV-ERABLE (UG/L AS AL) (01105)	ARSENIC TOTAL (UG/L AS AS) (01002)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD) (01027)	COPPER, DIS-SOLVED (UG/L AS CU) (01040)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE) (01045)	IRON, DIS-SOLVED (UG/L AS FE) (01046)
APR										
13...	<0.010	<0.20	0.030	0.030	<10	<1	<1	<1	40	<10
SEP										
27...	<0.010	<0.20	0.030	0.030	40	<1	<1	1	20	10

DATE	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB) (01051)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN) (01055)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG) (71900)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI) (01067)	STRON-TIUM, DIS-SOLVED (UG/L AS SR) (01080)	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
APR									
13...	<5	<5	<10	<10	0.40	4	120	<10	0.2
SEP									
27...	<1	<1	<10	<10	0.30	<1	120	<10	1.2

WITHLACOOCHEE RIVER BASIN

02313200 WITHLACOOCHEE RIVER AT DUNNELLON, FL

LOCATION.--Lat 29°02'45", long 82°27'53", in NW¼ sec.35, T.16 S., R.18 E., Marion County, Hydrologic Unit 03100208, near right bank 50 ft upstream from bridge on U.S. Highway 41 at Dunnellon, 0.6 mi downstream from Blue Run, 0.8 mi upstream from Lake Rousseau, and 25 mi upstream from mouth.

DRAINAGE AREA.--1,960 mi^2, approximately.

PERIOD OF RECORD.--February 1963 to current year (gage heights only).

REVISED RECORDS.--WDR FL-72-3: Drainage area.

GAGE.--Nonrecording gage. Datum of gage is National Geodetic Vertical Datum of 1929.

REMARKS.--Stage regulated by Lake Rousseau.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height observed, 29.64 ft, Sept. 12, 1964; minimum, 23.10 ft, estimated, Oct. 11, 1972.

EXTREMES FOR CURRENT YEAR.--Maximum gage height observed, 29.00 ft, Oct. 1; minimum observed, 27.50 ft., June 11,12.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1931, 33.0 ft in April 1960, from floodmarks.

GAGE HEIGHT, IN FEET ABOVE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
INSTANT VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	29.00	28.25	28.10	28.25	28.30	28.40	27.90	27.90	27.90	27.95	28.04	27.86
2	28.95	28.25	28.10	28.25	28.30	28.45	27.55	27.80	27.90	27.90	28.04	27.92
3	28.95	28.25	28.10	28.20	28.15	28.10	27.60	27.70	27.70	27.90	28.00	28.00
4	28.95	28.15	28.10	28.20	28.10	27.95	27.60	27.65	27.70	27.90	---	28.04
5	28.95	28.15	28.10	28.15	28.00	27.90	27.60	27.70	27.70	27.90	27.90	28.00
6	28.85	28.15	28.30	28.20	28.05	27.88	27.70	27.60	27.70	27.85	27.80	27.96
7	28.80	28.10	28.30	28.20	28.10	27.80	27.80	27.60	27.70	27.85	27.80	27.90
8	28.70	28.10	28.30	28.15	28.15	27.70	27.70	27.60	27.80	27.80	27.80	27.86
9	28.65	28.10	28.30	28.10	28.10	27.70	27.70	27.60	27.85	27.80	27.96	27.82
10	28.65	28.10	28.30	28.10	28.05	27.75	27.60	27.60	27.65	27.85	28.00	27.80
11	28.60	28.10	28.33	28.10	28.10	27.85	27.60	27.65	27.50	27.80	27.94	27.82
12	28.55	28.10	28.35	28.10	28.00	27.90	27.60	27.68	27.50	27.80	27.96	27.86
13	28.50	28.00	28.35	28.10	28.00	28.00	27.60	27.70	27.70	27.80	28.00	27.90
14	28.40	28.00	28.37	28.10	28.05	28.00	27.60	27.78	27.78	27.80	28.00	27.92
15	28.45	28.00	28.45	28.05	28.05	28.00	27.70	27.88	27.80	27.80	27.96	27.94
16	28.52	27.90	28.40	28.10	28.08	28.00	27.78	27.90	27.90	27.80	27.90	28.00
17	28.55	27.80	28.40	28.10	28.00	27.95	27.70	28.00	27.90	27.80	27.80	28.10
18	28.50	27.80	28.40	28.10	27.90	27.95	27.70	27.90	27.85	27.90	27.74	28.10
19	28.50	27.80	28.30	28.10	27.90	27.95	27.70	27.80	27.90	28.00	27.74	28.04
20	28.50	27.80	28.35	28.15	28.00	28.00	27.70	27.80	27.90	27.90	27.84	28.00
21	28.45	27.90	28.40	28.15	28.15	27.95	27.80	27.70	27.95	28.00	27.94	27.90
22	28.50	27.90	28.45	28.20	28.25	27.85	27.70	27.75	27.90	28.00	28.00	28.00
23	28.50	28.30	28.45	28.00	28.20	27.80	27.55	27.80	28.00	28.10	28.00	28.04
24	28.50	28.20	28.45	27.95	27.95	27.70	27.60	27.80	28.10	28.10	28.00	28.10
25	28.45	28.05	28.40	27.95	27.95	27.65	27.60	27.80	28.00	28.00	28.00	28.20
26	28.40	28.10	28.35	27.95	27.90	27.60	27.70	27.85	27.65	28.00	27.96	28.10
27	28.40	28.20	28.30	28.05	28.05	27.60	27.75	27.85	27.60	27.74	28.00	28.04
28	28.35	28.25	28.30	28.10	28.10	27.60	27.80	27.80	27.65	27.74	27.94	28.08
29	28.30	28.20	28.30	28.20	---	27.60	27.80	27.90	27.75	27.74	27.90	28.00
30	28.28	28.10	28.30	28.25	---	27.70	27.80	27.90	27.85	27.80	27.84	28.00
31	28.28	---	28.30	28.30	---	27.65	---	27.90	---	28.00	27.76	---
MEAN	28.58	28.07	28.31	28.13	28.07	27.87	27.68	27.77	27.79	27.88	---	27.98
MAX	29.00	28.30	28.45	28.30	28.30	28.45	27.90	28.00	28.10	28.10	---	28.20
MIN	28.28	27.80	28.10	27.95	27.90	27.60	27.55	27.60	27.50	27.74	---	27.80

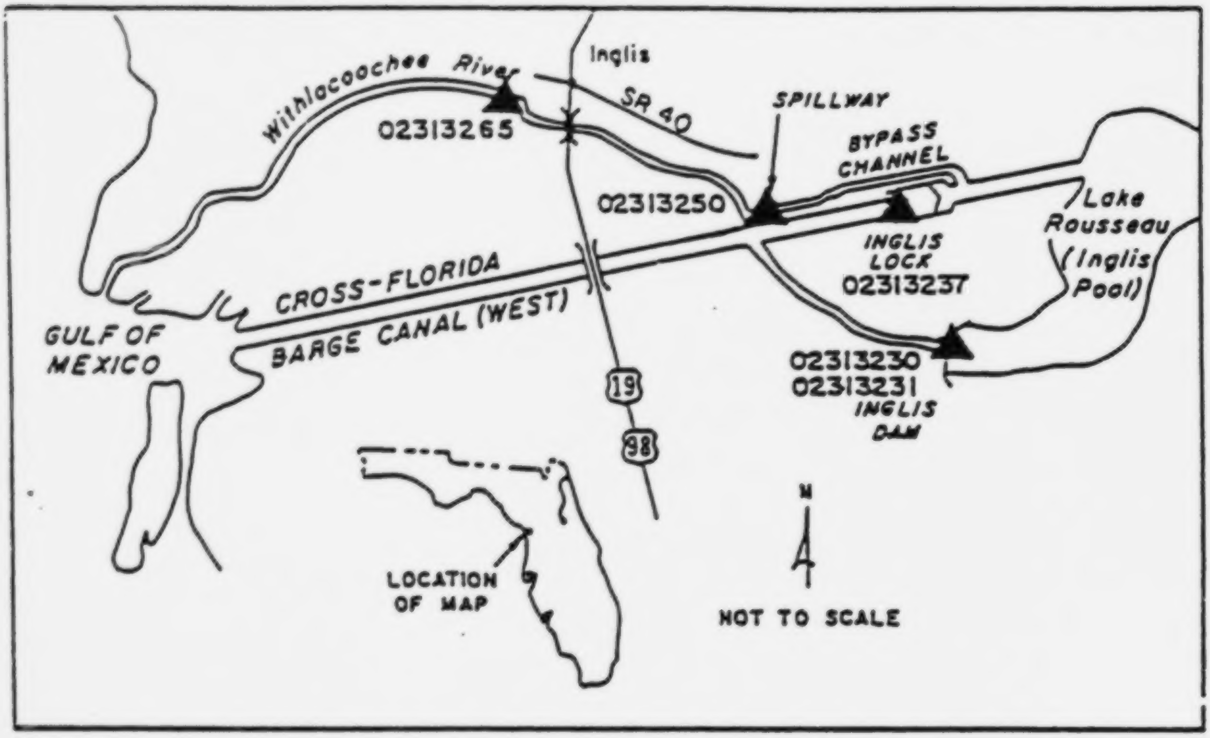
Inglis
Withlacoochee River
SR 40
02313265
SPILLWAY
BYPASS CHANNEL
02313250
Lake Rousseau (Inglis Pool)
INGLIS LOCK
02313237
CROSS-FLORIDA
BARGE CANAL (WEST)
GULF OF MEXICO
19
98
02313230
02313231
INGLIS DAM
N
LOCATION OF MAP
NOT TO SCALE

Figure 23.--Location of stream gaging stations in the lower Withlacoochee River basin.

WITHLACOOCHEE RIVER BASIN

02313230 WITHLACOOCHEE RIVER AT INGLIS DAM, NEAR DUNNELLON, FL

LOCATION.--Lat 29°00'35", long 82°37'01", in SW¼ sec.8, T.17 S., R.17 E., Levy County, Hydrologic Unit 03100208, on left bank at upstream side of control structure of Inglis Dam, 3.5 mi southeast of Inglis, 9.8 mi west of Dunnellon, and 11 mi upstream from mouth.

DRAINAGE AREA.--2,020 mi^2, approximately.

PERIOD OF RECORD.--June 1964 to September 1969 (gage heights and discharge measurements only), October 1969 to current year.

REVISED RECORDS.--WDR FL-72-3: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929. Prior to July 20, 1971, water-stage recorder at site in forebay of powerhouse of the old Inglis Dam and July 20, 1971, to Aug. 23, 1972, at site in private boat basin on south shore of Lake Rousseau at same datum. Auxiliary gage at downstream side of control structure.

REMARKS.--Records good. Records include flow of springs, approximately 70 ft^3/s just downstream from control structure; spring flow is considered to be mostly leakage from Lake Rousseau. Flow regulated by manipulation of gates in spillway. Discharge computed from relation between discharge and gate openings. Since December 1969, entire flow diverted below station from old river channel into Cross-Florida Barge Canal, and diversions above station from Lake Rousseau, for boat lockages, through Cross-Florida Barge Canal (see station 02313237) and for maintaining flow in old river channel through Withlacoochee River Bypass Channel (see station 02313250). Records of gage height are published as elevations for Lake Rousseau (station 02313229) in the section of this report entitled LAKE ELEVATIONS.

COOPERATION.--Gate-opening record provided by U.S. Army Corps of Engineers.

AVERAGE DISCHARGE.--20 years, 417 ft^3/s, 302,100 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 4,500 ft^3/s, Oct. 12, 1979; maximum gage height, 28.28 ft, June 19, 1982; gates closed and flow consists of leakage, about 70 ft^3/s for all or part of some days in most years; minimum gage height, 21.67 ft, Oct. 11, 1972.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 2,790 ft^3/s, Oct. 1-6; maximum gage height, 27.96 ft, Mar. 2; gates closed and flow consists of leakage, about 70 ft^3/s for many days; minimum gage height, 25.85 ft, Oct. 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2790	460	460	612	70	70	70	70	327	237	70	229
2	2790	460	460	612	330	826	70	70	229	70	70	70
3	2790	460	359	549	460	919	70	70	70	70	332	70
4	2790	356	152	460	359	571	70	70	70	70	210	70
5	2790	1040	70	460	160	354	70	70	70	70	70	70
6	2790	805	70	460	70	290	70	70	70	70	70	70
7	2710	290	224	460	70	290	70	70	70	330	70	323
8	2380	290	404	352	70	290	70	70	443	220	70	203
9	2200	150	411	290	210	151	70	70	278	70	70	70
10	2200	70	460	290	290	70	283	70	70	70	330	70
11	2200	70	603	290	155	70	221	70	70	70	208	70
12	2200	70	900	290	70	70	70	70	70	70	70	70
13	1930	208	475	290	70	70	70	70	70	328	70	70
14	1490	290	418	290	70	70	70	70	70	203	70	70
15	1330	290	506	153	70	70	70	70	317	70	70	70
16	1330	290	756	70	216	70	70	70	145	70	70	70
17	1330	290	756	70	290	70	70	70	70	70	315	70
18	1330	152	756	70	149	70	70	322	70	70	198	70
19	1330	70	665	70	70	70	70	215	70	70	70	70
20	990	70	612	70	70	70	70	70	70	327	70	70
21	756	70	612	307	70	70	70	70	70	215	70	317
22	756	70	612	556	258	70	70	70	70	70	70	229
23	756	696	612	411	460	70	70	70	70	70	70	70
24	756	460	612	290	359	70	70	70	70	70	325	70
25	756	260	612	290	152	70	70	328	70	70	206	70
26	756	70	612	153	70	70	70	229	70	70	70	70
27	756	306	612	70	70	70	70	70	70	327	70	70
28	569	460	612	70	70	70	70	70	70	205	70	328
29	460	460	612	70	---	70	70	70	70	70	70	203
30	460	309	612	70	---	70	70	70	327	70	70	70
31	460	---	612	70	---	70	---	70	---	70	327	---
TOTAL	48931	9342	16249	8565	4828	5301	2464	2984	3676	3932	3991	3442
MEAN	1578	311	524	276	172	171	82.1	96.3	123	127	129	115
MAX	2790	1040	900	612	460	919	283	328	443	330	332	328
MIN	460	70	70	70	70	70	70	70	70	70	70	70
AC-FT	97050	18530	32230	16990	9580	10510	4890	5920	7290	7800	7920	6830

CAL YR 1988 TOTAL 210089 MEAN 574 MAX 4190 MIN 70 AC-FT 416700
WTR YR 1989 TOTAL 113705 MEAN 312 MAX 2790 MIN 70 AC-FT 225500

WITHLACOOCHEE RIVER BASIN

02313231 WITHLACOOCHEE RIVER BELOW INGLIS DAM, NEAR DUNNELLON, FL

LOCATION.--Lat 29°00'35", long 82°37'01", in SW¼ sec.8, T.17 S., R.17 E., Levy County, Hydrologic Unit 03100208, at downstream side of control structure of Inglis Dam, 3.5 mi southeast of Inglis, 9.8 mi west of Dunnellon, and 11 mi upstream from mouth.

DRAINAGE AREA.--Indeterminate.

PERIOD OF RECORD.--June 1964 to current year (gage heights only).

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929. Prior to June 21, 1971, at downstream end of lock chamber of former Inglis Dam at same datum. June 21, 1971, to Aug. 23, 1972, near left bank 1,500 ft downstream at same datum. This is the auxiliary gage for station 02313230 located at upstream side of control structure.

REMARKS.--Stage affected by tide and manipulation of gates immediately above gage.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 15.73 ft, Sept. 13, 1964; minimum, 3.72 ft, below NGVD, Jan. 16, 1972.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 6.40 ft, Nov. 5; minimum, 2.20 ft below NGVD, Mar. 9.

GAGE HEIGHT, IN FEET ABOVE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.72	1.28	.30	1.55	.73	.50	-.18	1.74	1.12	.91	.93	1.28
2	5.70	1.25	.0	1.37	.75	1.72	.15	.57	1.00	.89	.74	1.15
3	5.76	1.46	.52	1.47	1.13	2.46	.54	.38	.91	1.00	1.26	1.08
4	5.68	1.88	.60	.82	.92	1.57	.60	.47	.98	.90	.95	1.14
5	5.57	3.48	.35	.94	.81	1.10	.67	1.17	1.23	1.10	.91	.72
6	5.51	2.51	.45	1.28	.73	1.04	.35	1.25	1.44	.83	1.00	.70
7	5.38	.92	1.11	1.26	.89	.60	1.18	.78	1.38	1.16	1.34	1.16
8	4.78	.91	1.26	1.09	.65	.36	.60	.54	1.84	1.10	1.30	.89
9	4.57	.78	1.35	.94	-.05	-.21	.99	.80	1.80	.85	.95	.69
10	4.68	.87	1.32	.81	.32	-.30	1.04	1.62	.92	.80	1.08	.83
11	4.80	.79	1.48	.59	.51	.16	.20	.53	.60	.79	.68	.76
12	4.83	.65	2.02	.90	.35	.70	-.36	.40	.60	.84	.46	.85
13	4.18	1.07	.78	.86	.56	.98	-.02	.49	.94	.95	.83	.92
14	3.21	.97	.85	.73	.45	1.16	.30	.45	.81	1.11	.97	1.13
15	3.02	.86	1.15	.90	.34	1.03	.89	.56	1.21	1.08	1.10	1.15
16	3.08	1.36	1.79	.58	.31	.69	.49	.40	1.17	.91	1.11	1.31
17	3.10	1.15	1.67	.22	.20	.38	.19	.42	.78	1.17	1.41	.96
18	3.09	.74	1.60	.09	.27	.56	.39	.64	.61	1.14	1.07	.74
19	3.14	.98	1.52	.21	.18	.55	.57	.59	.84	1.27	.92	.72
20	2.60	1.31	1.55	.35	.63	.58	.62	.57	1.04	1.66	.62	.53
21	2.42	.73	1.49	-.15	1.28	.93	.36	.79	1.09	1.45	1.06	1.12
22	2.23	.07	1.38	.53	1.16	.90	.44	.72	.92	.95	.99	1.27
23	2.30	1.21	1.49	.58	.70	1.31	.67	.93	.95	.79	.90	1.00
24	2.45	.86	1.67	.55	.03	.66	.68	.90	1.07	.67	1.26	.58
25	2.09	.82	1.80	.64	-.07	.42	.72	1.06	.98	.63	1.10	1.37
26	2.10	1.06	1.61	.56	.28	.40	.79	.91	.86	.49	.99	1.25
27	2.24	1.73	1.45	.56	1.05	.42	.82	.41	.87	1.06	.99	.61
28	1.68	1.40	1.57	.53	1.04	.42	.89	.42	.99	.90	1.02	.94
29	1.39	.54	1.38	.60	---	.70	.82	.36	1.03	1.00	1.02	1.11
30	1.35	.70	1.39	.90	---	1.30	.95	.41	1.24	.95	1.10	1.31
31	1.30	---	1.51	.63	---	1.35	---	.56	---	.95	1.48	---
MEAN	3.55	1.14	1.24	.74	.58	.79	.54	.70	1.04	.98	1.02	.98
MAX	5.76	3.48	2.02	1.55	1.28	2.46	1.18	1.74	1.84	1.66	1.48	1.37
MIN	1.30	.07	.00	-.15	-.07	-.30	-.36	.36	.60	.49	.46	.53

CAL YR 1988 MEAN 1.54 MAX 8.13 MIN -.57
WTR YR 1989 MEAN 1.11 MAX 5.76 MIN -.36

WITHLACOOCHEE RIVER BASIN

02313237 CROSS-FLORIDA BARGE CANAL AT INGLIS LOCK, NEAR INGLIS, FL

LOCATION.--Lat 29°01'30", long 82°37'00", in SW¼ sec .5, T.17 S., R.17 E., Levy County, Hydrologic Unit 03100208, at downstream side of Inglis Lock, 0.8 mi downstream from Lake Rousseau, and 3.2 mi east of Inglis.

DRAINAGE AREA.--Indeterminate.

PERIOD OF RECORD.--January 1970 to current year.

GAGE.--Nonrecording gage.

REMARKS.--Records good. Discharge at station is a diversion of flow, for boat lockages, from Lake Rousseau and Withlacoochee River into Gulf of Mexico, and is computed using daily volume of water used for lockage.

COOPERATION.--Lockage record provided by U.S. Army Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 138 ft^3/s, Jan. 11, 1970; no flow for many days each year.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	.00	.00	17	.00	.00	35	17	.00	34	.00	.00
2	17	.00	.00	.00	18	.00	18	.00	.00	35	.00	16
3	.00	17	17	.00	17	.00	16	.00	47	.00	18	43
4	.00	17	17	.00	17	46	19	17	37	.00	.00	.00
5	17	14	.00	.00	17	16	34	15	.00	.00	70	.00
6	17	17	.00	.00	17	.00	.00	.00	.00	.00	99	.00
7	17	4.8	.00	33	.00	.00	.00	.00	.00	17	.00	.00
8	18	.00	.00	19	.00	.00	16	.00	.00	16	.00	13
9	17	.00	16	.00	17	17	31	.00	18	.00	.00	17
10	.00	.00	17	.00	17	.00	16	.00	56	.00	.00	36
11	.00	.00	19	.00	16	33	17	17	40	.00	.00	12
12	.00	.00	.00	19	16	18	.00	18	.00	.00	16	5.5
13	17	.00	.00	17	.00	.00	.00	18	.00	.00	.00	.00
14	17	.00	.00	52	.00	.00	.00	35	.00	.00	.00	.00
15	16	.00	17	87	.00	.00	18	17	.00	.00	.00	.00
16	50	.00	16	.00	17	17	17	.00	16	48	.00	18
17	4.8	.00	16	.00	.00	.00	4.7	.00	.00	.00	.00	16
18	.00	.00	17	.00	18	18	.00	.00	75	.00	.00	.00
19	.00	.00	.00	.00	30	62	.00	16	.00	.00	.00	.00
20	.00	.00	.00	18	.00	.00	16	49	.00	.00	71	.00
21	16	.00	.00	17	.00	.00	16	33	.00	.00	.00	.00
22	46	.00	.00	18	.00	.00	17	17	18	34	.00	.00
23	55	.00	19	17	17	18	34	.00	18	.00	.00	.00
24	19	.00	.00	.00	18	16	17	.00	.00	.00	.00	13
25	.00	.00	.00	.00	18	35	.00	.00	111	.00	.00	.00
26	.00	58	.00	.00	18	35	.00	17	.00	.00	86	.00
27	17	34	.00	.00	.00	16	.00	.00	.00	17	62	.00
28	19	.00	.00	18	.00	.00	17	116	.00	.00	.00	.00
29	17	.00	.00	35	---	.00	51	.00	.00	16	.00	.00
30	18	.00	.00	17	---	16	17	.00	16	.00	.00	32
31	.00	---	.00	.00	---	17	---	.00	---	.00	18	---
TOTAL	431.80	161.80	171.00	384.00	288.00	380.00	426.70	402.00	452.00	217.00	440.00	221.50
MEAN	13.9	5.39	5.52	12.4	10.3	12.3	14.2	13.0	15.1	7.00	14.2	7.38
MAX	55	58	19	87	30	62	51	116	111	48	99	43
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	856	321	339	762	571	754	846	797	897	430	873	439

CAL YR 1988 TOTAL 2934.80 MEAN 8.02 MAX 81 MIN .00 AC-FT 5820
WTR YR 1989 TOTAL 3975.80 MEAN 10.9 MAX 116 MIN .00 AC-FT 7890

WITHLACOOCHEE RIVER BASIN

02313250 WITHLACOOCHEE RIVER BYPASS CHANNEL NEAR INGLIS, FL

LOCATION.--Lat 29°01'15", long 82°38'17", in NE¼ sec.12, T.17 S., R.16 E., Levy County, Hydrologic Unit 03100208, on right bank 90 ft upstream from control structure, 0.1 mi upstream from mouth, and 2.0 mi east of Inglis.

DRAINAGE AREA.--Indeterminate.

PERIOD OF RECORD.--January 1970 to current year.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (U.S. Army Corps of Engineers bench mark). Prior to July 16, 1971, water-stage recorder for Withlacoochee River at Inglis Dam, near Dunnellon (station 02313230) used as base gage for this station.

REMARKS.--Records good. Flow regulated by manipulation of gates in spillway; channel completed and flow through spillway began December 17, 1969. Discharge computed from relation between discharge and gate openings. Discharge at station is the diversion from Lake Rousseau to maintain flow in the old river channel.

COOPERATION.--Gate-opening record provided by U.S. Army Corps of Engineers.

AVERAGE DISCHARGE.--19 years, 1,134 ft^3/s, 821,600 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 1,840 ft^3/s, Oct. 1, 1987; maximum gage height, 28.31 ft, May 19, 1977; minimum daily discharge, 53 ft^3/s, Oct. 11, 1972; minimum gage height, 21.35 ft, Oct. 8, 1972.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 1,640 ft^3/s, Feb. 1; maximum gage height, 27.76 ft, June 8; minimum daily discharge, 406 ft^3/s, June 15; minimum gage height, 25.35 ft, Oct. 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1000	1550	1530	1540	1640	1370	1230	1130	762	1030	896	776
2	990	1530	1530	1530	1630	1610	1170	1200	844	1130	1090	855
3	990	1530	1520	1520	1580	1550	1060	1200	860	1130	976	919
4	997	1510	1520	1540	1550	1480	1030	1130	736	1130	1070	958
5	994	819	1560	1550	1530	1470	1030	1200	683	1130	1160	958
6	979	1070	1590	1550	1560	1470	1030	1090	683	1130	1080	958
7	968	1520	1590	1540	1570	1460	1030	993	683	920	907	775
8	982	1520	1580	1530	1580	1460	1090	993	836	974	855	829
9	1040	1520	1580	1550	1580	1330	1130	993	1400	1020	855	897
10	1070	1540	1590	1570	1560	1160	936	993	1230	993	761	831
11	1080	1560	1600	1580	1530	1120	928	993	814	993	948	752
12	1080	1570	1570	1580	1550	1260	1030	907	615	993	993	752
13	1090	1570	1550	1560	1560	1400	1030	769	580	806	993	752
14	1160	1560	1580	1550	1560	1440	1030	718	580	880	1090	752
15	1250	1540	1600	1540	1580	1440	1030	718	406	958	1130	752
16	1300	1510	1600	1550	1580	1440	1110	718	686	914	1130	752
17	1340	1480	1570	1560	1550	1440	1160	782	876	890	899	861
18	1350	1480	1550	1580	1520	1440	1160	821	924	890	810	1020
19	1350	1480	1550	1590	1400	1440	1160	999	924	890	731	1060
20	1370	1410	1560	1590	1340	1440	1160	1030	1010	704	752	1060
21	1440	1300	1570	1610	1340	1440	1160	865	1060	797	786	858
22	1480	1270	1590	1580	1480	1440	1160	740	1060	890	786	891
23	1500	1610	1590	1520	1560	1440	1080	718	1230	999	895	993
24	1510	1550	1580	1520	1520	1440	940	718	1520	1210	774	1040
25	1520	1520	1580	1510	1440	1380	890	625	1580	1270	870	1160
26	1510	1550	1560	1510	1300	1340	890	719	1370	1270	958	1200
27	1510	1550	1540	1460	1230	1270	890	786	952	1080	958	1200
28	1490	1560	1540	1410	1230	1230	890	786	855	993	958	1010
29	1520	1540	1550	1550	---	1230	954	786	855	814	958	1060
30	1530	1530	1560	1620	---	1230	993	811	855	718	958	1070
31	1550	---	1550	1630	---	1230	---	855	---	789	748	---
TOTAL	38940	44249	48530	48020	42050	42890	31381	27786	27469	30335	28775	27751
MEAN	1256	1475	1565	1549	1502	1384	1046	896	916	979	928	925
MAX	1550	1610	1600	1630	1640	1610	1230	1200	1580	1270	1160	1200
MIN	968	819	1520	1410	1230	1120	890	625	406	704	731	752
AC-FT	77240	87770	96260	95250	83410	85070	62240	55110	54480	60170	57080	55040

CAL YR 1988 TOTAL 460988 MEAN 1260 MAX 1620 MIN 442 AC-FT 914400
WTR YR 1989 TOTAL 438176 MEAN 1200 MAX 1640 MIN 406 AC-FT 869100

02313265 WITHLACOOCHEE RIVER AT CRACKERTOWN, FL

LOCATION.--Lat 29°01'49", long 82°40'41", in NW¼ sec.3, T.17 S., R.16 E., Levy County, Hydrologic Unit 03100208, near right bank at end of Florida Power Corporation powerplant bulkhead and pump outlet, 0.5 mi west of Inglis, 0.7 mi southeast of Crackertown, and 6.6 mi upstream from mouth.

DRAINAGE AREA.--Indeterminate.

PERIOD OF RECORD.--April 1967 to current year (gage heights only).

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.

REMARKS.--Stage affected by tide and by manipulation of gates in control structure upstream. The stage record published is the maximum and minimum tide event for each calendar day.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 6.57 ft, Aug. 31, 1985; minimum, 3.96 ft below NGVD, Dec 17, 1972.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 4.71 ft, Nov. 5; minimum, 2.18 ft below NGVD, Apr. 12.

GAGE HEIGHT, IN FEET ABOVE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
TIDAL HIGH VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.95	2.30	1.32	2.67	2.49	2.26	1.52	3.69	3.33	3.44	3.48	3.39
2	2.72	2.14	.83	2.53	2.52	2.78	2.64	2.33	3.45	3.63	3.30	3.14
3	2.71	2.53	2.02	2.99	2.38	2.93	2.57	2.50	3.59	3.75	3.19	3.04
4	2.30	3.08	2.38	1.84	3.09	2.31	3.11	3.17	3.68	3.51	3.00	3.08
5	1.84	4.71	2.28	2.44	3.32	3.05	3.15	4.15	3.93	3.62	2.98	2.64
6	1.07	3.35	2.82	3.30	3.69	3.36	3.32	3.76	3.64	3.18	2.86	2.59
7	1.55	2.92	2.43	3.65	3.82	3.05	4.11	3.21	3.46	2.88	3.23	2.65
8	1.06	2.77	3.41	3.63	3.65	2.51	3.44	3.18	3.34	2.75	3.29	2.11
9	2.48	2.96	3.70	3.60	1.68	1.63	3.35	3.35	2.92	2.56	2.98	2.19
10	2.80	3.21	3.54	3.53	2.18	2.08	3.09	3.87	2.28	2.43	2.41	2.38
11	3.21	3.52	3.67	2.65	2.67	2.78	1.19	2.13	2.04	2.32	2.07	2.62
12	3.63	2.97	2.49	2.67	2.52	3.18	1.24	1.63	2.04	2.35	2.27	3.16
13	2.74	3.44	2.37	2.44	2.71	3.10	1.18	1.66	2.71	2.39	2.78	3.63
14	1.76	3.16	2.09	2.72	2.29	3.06	1.92	1.94	2.63	2.81	3.24	3.94
15	2.53	2.69	2.28	2.85	2.32	2.42	2.94	2.23	2.74	3.07	3.71	3.93
16	2.57	2.76	2.27	2.63	1.78	2.23	2.06	2.18	3.26	3.00	3.80	4.00
17	2.71	2.55	1.83	2.30	2.38	1.89	2.21	2.41	3.13	3.68	3.72	---
18	2.35	2.56	2.17	2.45	1.92	2.43	2.71	2.10	3.15	3.74	3.64	---
19	2.49	3.41	2.51	2.30	2.55	2.81	2.88	3.14	3.34	4.05	3.52	---
20	2.85	3.48	3.04	2.85	2.65	2.94	3.00	3.14	3.66	4.06	3.01	---
21	3.82	2.56	2.30	2.32	3.51	3.17	2.84	3.18	3.71	3.86	3.22	---
22	3.51	2.67	3.22	.90	3.42	3.25	2.79	3.22	3.48	3.18	3.28	---
23	3.64	1.33	3.24	1.58	1.88	3.83	3.08	3.15	3.22	2.64	2.99	---
24	3.92	1.93	3.29	2.28	1.28	2.66	3.04	3.23	3.17	2.91	2.83	---
25	3.80	2.74	3.38	2.30	1.91	2.66	2.98	2.74	2.86	2.37	2.98	---
26	3.27	3.26	2.65	2.46	2.43	2.88	2.63	2.56	2.70	2.63	2.67	---
27	3.89	3.96	2.28	2.50	3.29	2.67	2.57	2.26	2.70	2.63	3.22	---
28	3.64	4.09	2.75	2.55	2.62	2.68	2.30	1.84	3.22	3.01	3.38	---
29	3.27	1.35	2.36	2.56	---	2.58	2.36	2.37	3.30	3.19	3.62	---
30	3.08	2.16	2.51	2.80	---	2.61	2.81	2.55	3.60	3.35	3.64	---
31	2.47	---	2.73	2.66	---	2.64	---	2.89	---	3.51	3.57	---
MEAN	2.79	2.89	2.59	2.61	2.61	2.72	2.63	2.77	3.14	3.11	3.16	---
MAX	3.92	4.71	3.70	3.65	3.82	3.83	4.11	4.15	3.93	4.06	3.80	---
MIN	1.06	1.33	.83	.90	1.28	1.63	1.18	1.63	2.04	2.32	2.07	---

CAL YR 1988 MEAN 2.76 MAX 4.90 MIN .70

02313265 WITHLACOOCHEE RIVER AT CRACKERTOWN, FL--Continued

GAGE HEIGHT, IN FEET ABOVE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
TIDAL LOW VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	-.79	-.35	-.51	.00	-.30	-.69	-1.69	-.64	-1.78	-1.52	-1.34	-.93
2	-.50	-.29	-.57	-.42	-.57	-.51	-1.60	-.85	-1.69	-1.39	-1.18	-.70
3	.11	.19	-.75	-.60	-1.13	-.62	-1.18	-1.32	-1.82	-1.31	-1.17	-.69
4	-.40	.74	-.53	-1.28	-1.23	-.77	-1.20	-1.45	-1.76	-1.32	-.61	-.65
5	-1.15	.76	-.92	-1.38	-1.12	-.99	-1.36	-1.15	-1.20	-1.32	-.87	-1.00
6	-1.21	-.74	-.97	-.85	-1.05	-.91	-1.90	-1.41	-.47	-1.20	-.68	-.81
7	-1.19	-.67	-1.00	-1.01	-.76	-1.09	-1.38	-.45	-.70	-1.08	-.25	-.69
8	-1.45	-.88	-.97	-1.07	-.86	-1.47	-1.24	-1.31	-1.06	-1.11	-.16	-.49
9	-1.09	-.97	-.88	-1.10	-1.46	-2.00	-1.39	-1.72	1.23	-.60	-.49	-.71
10	-1.04	-.82	-1.15	-1.14	-1.22	-1.61	-1.17	-1.09	.22	-.38	-.97	-.94
11	-.85	-.94	-.93	-1.20	-1.05	-1.97	-1.56	-.87	-.49	-.35	-.72	-1.36
12	-.93	-1.02	-1.25	-.57	-.91	-.62	-2.18	-1.01	-.66	-.55	-1.27	-1.37
13	-1.56	-.72	-.57	-.41	-.86	-.93	-1.46	-.87	-.56	-.72	-1.15	-1.38
14	-1.72	-.90	-1.04	-.80	-.69	-.62	-1.42	-1.00	-1.19	-.73	-1.11	-1.22
15	-1.16	-.89	-.55	-.50	-.84	-.20	-.77	-.86	-.90	-1.02	-1.19	-1.02
16	-.78	-.10	-.14	-.54	-1.08	-.66	-.78	-1.20	-1.18	-1.46	-1.21	-1.22
17	-.64	-.33	-.43	-1.15	-1.25	-1.04	-1.09	-1.33	-1.49	-1.50	-1.51	---
18	-.51	-.31	-1.19	-1.21	-1.31	-.98	-1.07	-1.97	-1.78	-1.50	-1.24	---
19	-.33	-.50	-1.02	-1.26	-1.25	-.94	-1.08	-1.61	-1.60	-1.40	-1.29	---
20	-.28	-.23	-1.03	-1.03	-1.05	-1.07	-1.38	-1.37	-1.20	-.05	-1.60	---
21	-.08	-1.11	-1.14	-1.60	-.57	-.52	-1.48	-1.89	-1.10	-1.40	-1.00	---
22	-.40	-1.64	-1.24	-1.81	-.63	-.59	-1.47	-1.74	-.87	-1.26	-1.16	---
23	-.48	-.14	-1.09	-1.41	-.17	-.15	-1.45	-1.19	-1.11	-1.15	-.92	---
24	-.40	-1.36	-1.08	-1.16	-.98	-.93	-.30	-1.75	-.70	-.88	-1.04	---
25	-1.25	-1.36	-1.06	-.98	-1.03	-1.21	-1.15	-1.50	-.20	-.83	-.99	---
26	-1.01	-.75	-1.21	-.66	-.68	-.61	-1.32	-1.59	-.37	-.98	-.93	---
27	-.82	-.26	-.90	-.57	.14	-1.07	-1.09	-1.47	-.82	-1.17	-1.13	---
28	-.91	-.68	-.47	-.65	-.02	-.89	-.90	-1.36	-1.07	-1.34	-1.16	---
29	-.89	-1.16	-.51	-.39	---	-1.10	-.86	-1.42	-1.31	-1.56	-1.10	---
30	-.53	-.61	-.21	-.26	---	-.43	-.82	-1.21	-1.61	-1.59	-.90	---
31	-.23	---	.01	-.22	---	-.05	---	-1.46	---	-1.49	-1.35	---
MEAN	-.79	-.60	-.82	-.88	-.85	-.88	-1.26	-1.29	-.97	-1.10	-1.02	---
MAX	.11	.76	.01	.00	.14	-.05	-.30	-.45	1.23	-.05	-.16	---
MIN	-1.72	-1.64	-1.25	-1.81	-1.46	-2.00	-2.18	-1.97	-1.82	-1.59	-1.60	---

CAL YR 1988 MEAN -.97 MAX 1.92 MIN -2.80

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MISCELLANEOUS WATER-QUALITY DATA

MISCELLANEOUS SURFACE WATER QUALITY RECORDS
OCTOBER 1988 TO SEPTEMBER 1989

The following data were collected in conjunction with a detention pond investigative study.

283442081260601 - DETENTION POND INLET ON SILVER STAR ROAD AT ORLANDO

DATE	TIME	SPECIFIC CONDUCTANCE LAB (US/CM) (90095)	PH LAB (STANDARD UNITS) (00403)	COLOR (PLATINUM-COBALT UNITS) (00080)	CALCIUM DISSOLVED (MG/L AS CA) (00915)	MAGNESIUM, DISSOLVED (MG/L AS MG) (00925)	SODIUM, DISSOLVED (MG/L AS NA) (00930)	POTASSIUM, DISSOLVED (MG/L AS K) (00935)	ALKALINITY LAB (MG/L AS CACO3) (90410)	SULFATE DISSOLVED (MG/L AS SO4) (00945)	CHLORIDE, DISSOLVED (MG/L AS CL) (00940)
JUL 18-18	1719	243	7.06	--	44	1.8	2.3	1.8	113	3.0	3.9
JUL 19-20	1940	243	7.12	--	46	1.7	2.4	1.8	111	4.1	4.0
AUG 25-25	1619	213	7.15	80	39	1.3	2.4	1.6	92	4.7	4.0
SEP 05-05	1308	178	7.06	60	31	0.90	1.8	1.3	77	3.9	3.1
SEP 18-18	1544	210	7.62	80	40	1.4	2.5	1.8	93	5.0	4.1
SEP 22-22	1745	179	7.35	60	33	1.0	1.8	1.4	77	4.6	2.9
SEP 22-22	2122	78	6.85	20	14	0.40	0.60	0.90	31	2.7	1.0
SEP 25-25	1618	133	7.12	30	21	0.60	0.80	0.80	57	3.1	1.5

DATE	FLUORIDE, DISSOLVED (MG/L AS F) (00950)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L) (70300)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L) (00500)	NITROGEN, NITRITE TOTAL (MG/L AS N) (00615)	NITROGEN, NITRITE DISSOLVED (MG/L AS N) (00613)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) (00631)	NITROGEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N) (00608)	NITROGEN,AMMONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITROGEN,AMMONIA + ORGANIC DIS. (MG/L AS N) (00623)
JUL 18-18	--	--	186	0.010	0.010	<0.020	0.030	0.040	0.060	2.4	0.65
JUL 19-20	--	--	187	0.010	0.010	0.020	0.020	0.150	0.150	2.0	0.84
AUG 25-25	0.30	144	159	0.040	--	0.180	--	0.260	--	0.77	--
SEP 05-05	0.60	116	154	0.010	<0.010	0.080	0.080	0.040	0.040	1.4	0.40
SEP 18-18	0.20	147	161	0.030	0.030	0.120	0.120	0.130	0.130	0.95	0.55
SEP 22-22	0.20	114	143	0.040	0.040	0.180	0.170	0.080	0.080	1.1	0.39
SEP 22-22	0.20	49	65	0.020	0.020	0.070	0.070	0.030	0.020	0.36	<0.20
SEP 25-25	0.20	69	119	0.020	0.020	0.070	0.080	<0.010	<0.010	1.5	<0.20

283442081250601 - DETENTION POND INLET ON SILVER STAR ROAD AT ORLANDO--Continued

DATE	PHOS-PHOROUS TOTAL (MG/L AS P) (00665)	PHOS-PHOROUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS, ORTHO, TOTAL (MG/L AS P) (70507)	PHOS-PHOROUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD) (01027)	CADMIUM DIS-SOLVED (UG/L AS CD) (01025)	COBALT, TOTAL RECOV-ERABLE (UG/L AS CO) (01037)	COBALT, DIS-SOLVED (UG/L AS CO) (01035)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU) (01042)	COPPER, DIS-SOLVED (UG/L AS CU) (01040)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE) (01045)
JUL 18-18	0.220	0.070	0.090	0.050	<10	<10	--	--	<10	10	1800
JUL 19-20	0.190	0.060	0.080	0.050	<10	<10	--	--	<10	<10	1700
AUG 25-25	0.100	--	0.050	--	<1	--	<1	--	3	--	540
SEP 05-05	0.190	0.060	0.030	0.020	<1	<1	<1	<1	7	2	920
SEP 18-18	0.090	0.030	0.030	0.040	<1	<1	<1	<1	2	--	490
SEP 22-22	0.130	0.020	0.030	0.020	<1	<1	<1	<1	3	7	600
SEP 22-22	0.080	0.040	0.050	0.050	<1	<1	<1	<1	2	2	120
SEP 25-25	0.150	<0.020	0.020	0.010	<1	<1	<1	<1	6	2	520

DATE	IRON, DIS-SOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB) (01051)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN) (01055)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI) (01067)	NICKEL, DIS-SOLVED (UG/L AS NI) (01065)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN) (01092)	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
JUL 18-18	1000	<100	<100	60	50	--	--	50	20	15
JUL 19-20	1100	<100	<100	60	40	--	--	30	20	18
AUG 25-25	--	3	--	--	--	2	--	30	--	14
SEP 05-05	270	20	2	--	--	3	<1	100	20	13
SEP 18-18	290	2	1	--	--	<1	<1	30	30	9.1
SEP 22-22	210	7	1	--	--	1	<1	40	20	8.6
SEP 22-22	30	3	<1	--	--	<1	<1	30	20	5.4
SEP 25-25	120	20	2	--	--	2	<1	60	20	6.9

283442081250602 - DETENTION POND OUTLET ON SILVER STAR ROAD AT ORLANDO

DATE	TIME	SPE-CIFIC CON-DUCT-ANCE LAB (US/CM) (90095)	PH LAB (STAND-ARD UNITS) (00403)	COLOR (PLAT-INUM-COBALT UNITS) (00080)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)
JUL 18-18	1719	213	7.48	--	38	1.5	2.2	1.5	96	4.6	3.6
JUL 19-20	1940	225	7.29	--	42	1.6	2.3	1.6	99	5.8	4.0
AUG 25-25	1625	189	7.37	70	35	1.2	2.1	1.4	82	4.1	3.9
SEP 05-05	1311	228	7.14	80	42	1.4	2.5	1.6	101	4.7	4.3
SEP 18-18	1556	162	6.94	50	30	1.0	1.9	1.5	67	4.1	2.9
SEP 22-22	1750	184	7.09	60	35	1.1	1.9	1.5	80	4.2	3.3
SEP 22-22	2125	175	7.14	60	33	1.0	1.9	1.4	75	4.6	3.0
SEP 25-25	1621	138	6.92	40	26	0.70	1.0	1.1	72	3.5	2.0

283442081250602 - DETENTION POND OUTLET ON SILVER STAR ROAD AT ORLANDO--Continued

DATE	FLUORIDE, DISSOLVED (MG/L AS F) (00950)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L) (70300)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L) (00500)	NITROGEN, NITRITE TOTAL (MG/L AS N) (00615)	NITROGEN, NITRITE DISSOLVED (MG/L AS N) (00613)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) (00631)	NITROGEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N) (00608)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N) (00623)
JUL 18-18	--	--	159	<0.010	<0.010	<0.020	<0.020	0.020	0.020	1.4	0.58
JUL 19-20	--	--	178	<0.010	<0.010	<0.020	<0.020	<0.010	<0.010	1.3	0.48
AUG 25-25	0.30	131	134	0.010	--	0.090	--	0.140	--	0.91	--
SEP 05-05	0.30	160	167	0.010	<0.010	0.030	<0.020	0.050	0.060	1.2	0.60
SEP 18-18	0.20	108	118	0.020	0.020	0.050	0.050	<0.010	<0.010	1.3	0.34
SEP 22-22	0.20	117	136	0.020	0.020	0.040	0.050	<0.010	<0.010	1.0	0.35
SEP 22-22	0.20	114	132	0.020	0.020	0.040	0.040	0.030	0.030	0.82	0.47
SEP 25-25	0.20	88	102	0.020	0.020	0.030	0.050	<0.010	<0.010	0.78	<0.20

DATE	PHOSPHOROUS TOTAL (MG/L AS P) (00665)	PHOSPHOROUS DISSOLVED (MG/L AS P) (00666)	PHOSPHORUS, ORTHO, TOTAL (MG/L AS P) (70507)	PHOSPHOROUS ORTHO, DISSOLVED (MG/L AS P) (00671)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD) (01027)	CADMIUM DISSOLVED (UG/L AS CD) (01025)	COBALT, TOTAL RECOVERABLE (UG/L AS CO) (01037)	COBALT, DISSOLVED (UG/L AS CO) (01035)	COPPER, TOTAL RECOVERABLE (UG/L AS CU) (01042)	COPPER, DISSOLVED (UG/L AS CU) (01040)	IRON, TOTAL RECOVERABLE (UG/L AS FE) (01045)
JUL 18-18	0.060	0.050	0.010	<0.010	<10	<10	--	--	<10	<10	250
JUL 19-20	0.100	0.020	0.010	<0.010	<10	<10	--	--	<10	<10	540
AUG 25-25	0.070	--	0.020	--	<1	--	<1	--	2	--	300
SEP 05-05	0.120	0.020	0.030	0.010	<1	<1	<1	<1	3	2	660
SEP 18-18	0.140	<0.020	0.020	0.010	<1	<1	<1	<1	2	2	320
SEP 22-22	0.100	<0.020	0.020	<0.010	<1	<1	<1	<1	2	2	470
SEP 22-22	0.070	<0.020	0.020	0.010	<1	<1	<1	<1	3	2	430
SEP 25-25	0.090	<0.020	0.020	0.010	<1	<1	<1	<1	2	1	320

DATE	IRON, DISSOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOVERABLE (UG/L AS PB) (01051)	LEAD, DISSOLVED (UG/L AS PB) (01049)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN) (01055)	MANGANESE, DISSOLVED (UG/L AS MN) (01056)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI) (01067)	NICKEL, DISSOLVED (UG/L AS NI) (01065)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN) (01092)	ZINC, DISSOLVED (UG/L AS ZN) (01090)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
JUL 18-18	100	<100	<100	20	<10	--	--	40	20	14
JUL 19-20	150	<100	<100	40	<10	--	--	40	10	18
AUG 25-25	--	2	--	--	--	1	--	30	--	12
SEP 05-05	340	4	<1	--	--	2	1	30	10	15
SEP 18-18	100	2	<1	--	--	1	<1	10	10	13
SEP 22-22	150	1	<1	--	--	<1	<1	10	10	14
SEP 22-22	160	3	<1	--	--	4	<1	20	10	8.4
SEP 25-25	120	3	<1	--	--	1	<1	20	10	7.2

MISCELLANEOUS SURFACE WATER QUALITY RECORDS
OCTOBER 1988 TO SEPTEMBER 1989

283442081260603 - DETENTION POND WETLAND OUTLET

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE LAB (US/CM) (90095)	PH LAB (STAND- ARD UNITS) (00403)	COLOR (PLAT- INUM- COBALT UNITS) (00080)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LINITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)
JUL 18-18	1719	209	7.31	--	38	1.6	2.4	1.8	92	4.5	4.0
JUL 19-20	1940	208	7.12	--	38	1.6	2.3	1.7	94	3.5	4.0
AUG 25-25	1630	166	7.16	50	30	1.1	2.0	1.5	69	4.2	3.8
SEP 05-05	1320	211	7.04	80	38	1.4	2.5	1.9	90	4.8	4.7
SEP 18-18	1600	159	7.23	50	28	1.0	1.9	1.9	66	4.4	3.7
SEP 22-22	1800	178	7.26	80	33	1.1	2.0	1.8	89	4.6	3.5
SEP 22-23	2200	174	7.33	60	33	1.1	2.0	1.6	75	4.4	3.2
SEP 25-25	1630	137	6.93	60	25	0.80	1.0	1.4	57	3.6	2.2

DATE	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L) (00500)	NITRO- GEN, NITRITE TOTAL (MG/L AS N) (00615)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)
JUL 18-18	--	--	167	0.030	0.030	0.080	0.080	0.150	0.150	1.3	1.1
JUL 19-20	--	--	194	<0.010	<0.010	0.030	0.030	0.110	0.110	1.6	0.64
AUG 25-25	0.40	117	152	0.010	--	0.380	--	<0.010	--	1.4	--
SEP 05-05	0.30	146	226	0.010	<0.010	0.210	0.210	0.100	0.100	2.4	0.63
SEP 18-18	0.30	107	132	0.020	0.020	0.210	0.210	0.070	0.080	1.1	0.53
SEP 22-22	0.20	120	171	0.020	0.020	0.230	0.230	<0.010	<0.010	1.5	0.28
SEP 22-23	0.20	119	128	0.020	0.020	0.150	0.140	<0.010	<0.010	0.49	0.28
SEP 25-25	0.20	90	120	0.020	0.020	0.100	0.100	0.060	0.060	1.2	0.27

DATE	PHOS- PHOROUS TOTAL (MG/L AS P) (00665)	PHOS- PHOROUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P) (70507)	PHOS- PHOROUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD) (01027)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO) (01037)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)
JUL 18-18	0.100	0.040	0.040	0.030	<10	<10	--	--	10	10	330
JUL 19-20	0.160	0.060	0.040	0.040	<10	<10	--	--	<10	<10	710
AUG 25-25	0.260	--	0.060	--	<1	--	<1	--	3	--	1200
SEP 05-05	0.270	0.040	0.040	0.030	<1	<1	<1	<1	4	<1	1400
SEP 18-18	0.140	0.050	0.050	0.050	<1	<1	<1	<1	2	1	550
SEP 22-22	0.160	0.030	0.040	0.030	<1	<1	<1	<1	3	4	770
SEP 22-23	0.060	0.030	0.030	0.030	<1	<1	<1	<1	2	2	340
SEP 25-25	0.130	0.030	0.040	0.030	<1	<1	<1	<1	3	1	600

MISCELLANEOUS SURFACE WATER QUALITY RECORDS
OCTOBER 1988 TO SEPTEMBER 1989

283442081250603 - DETENTION POND WETLAND OUTLET--Continued

DATE	IRON, DIS-SOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB) (01051)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN) (01055)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI) (01067)	NICKEL, DIS-SOLVED (UG/L AS NI) (01065)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN) (01092)	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
JUL 18-18	120	<100	<100	20	<10	--	--	30	10	13
JUL 19-20	150	<100	<100	40	10	--	--	30	10	15
AUG 25-25	--	9	--	--	--	2	--	20	--	10
SEP 05-05	170	20	<1	--	--	3	<1	40	<10	13
SEP 18-18	70	6	<1	--	--	<1	<1	10	10	13
SEP 22-22	80	10	<1	--	--	1	<1	30	10	13
SEP 22-23	100	2	<1	--	--	<1	<1	10	10	13
SEP 25-25	100	9	<1	--	--	1	<1	20	10	8.9

MISCELLANEOUS SURFACE WATER QUALITY RECORDS
OCTOBER 1988 TO SEPTEMBER 1989

The following data were collected in conjunction with an Apopka-Beauclair Canal investigative study.

281240081405900 - APOPKA-BEAUCLAIR CANAL 1 MI ABOVE LOCK NEAR ASTATULA

DATE	TIME	SPECIFIC CONDUCTANCE (US/CM) (00095)	PH (STANDARD UNITS) (00400)	TEMPERATURE WATER (DEG C) (00010)	COLOR (PLATINUM-COBALT UNITS) (00080)	TURBIDITY (NTU) (00076)	OXYGEN, DISSOLVED (MG/L) (00300)	CALCIUM DISSOLVED (MG/L AS CA) (00915)	MAGNESIUM, DISSOLVED (MG/L AS MG) (00925)
JUN									
15...	1515	436	8.9	32.0	30	15	9.0	37	19

DATE	SODIUM, DISSOLVED (MG/L AS NA) (00930)	POTASSIUM, DISSOLVED (MG/L AS K) (00935)	ALKALINITY LAB (MG/L AS CACO3) (90410)	SULFATE DISSOLVED (MG/L AS SO4) (00945)	CHLORIDE, DISSOLVED (MG/L AS CL) (00940)	NITROGEN, NITRITE TOTAL (MG/L AS N) (00615)	NITROGEN, NITRITE DISSOLVED (MG/L AS N) (00613)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) (00631)
JUN									
15...	17	13	136	24	42	0.010	<0.010	0.020	<0.020

DATE	NITROGEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N) (00608)	NITROGEN,AMMONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITROGEN,AMMONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOSPHOROUS TOTAL (MG/L AS P) (00665)	PHOSPHOROUS DISSOLVED (MG/L AS P) (00666)	PHOSPHORUS, ORTHO, TOTAL (MG/L AS P) (70507)	PHOSPHOROUS ORTHO, DISSOLVED (MG/L AS P) (00671)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
JUN									
15...	0.010	0.010	5.1	1.8	0.240	0.020	0.050	<0.010	27

DATE	TIME	NITROGEN, NO2+NO3 TOT. IN BOT MAT (MG/KG AS N) (00633)	NITROGEN,NH4 TOTAL IN BOT. MAT. (MG/KG AS N) (00611)	NITROGEN,NH4 + ORG. TOT IN BOT MAT (MG/KG AS N) (00626)	PHOSPHOROUS TOTAL IN BOT. MAT. (MG/KG AS P) (00668)	CARBON, INORG + ORGANIC TOT. IN BOT MAT (MG/KG AS C) (00693)	CARBON, INORGANIC, TOT IN BOT MAT (G/KG AS C) (00686)
JUN							
15...	1515	<2.0	16	1000	380	15	8.3

283730081373000 - LAKE APOPKA NEAR CENTER NEAR WINTER GARDEN

DATE	TIME	SPECIFIC CONDUCTANCE (US/CM) (00095)	PH (STANDARD UNITS) (00400)	TEMPERATURE WATER (DEG C) (00010)	COLOR (PLATINUM-COBALT UNITS) (00080)	TURBIDITY (NTU) (00076)	OXYGEN, DISSOLVED (MG/L) (00300)	CALCIUM DISSOLVED (MG/L AS CA) (00915)	MAGNESIUM, DISSOLVED (MG/L AS MG) (00925)
JUN									
15...	1105	416	9.1	30.0	30	12	7.3	32	19

DATE	SODIUM, DISSOLVED (MG/L AS NA) (00930)	POTASSIUM, DISSOLVED (MG/L AS K) (00935)	ALKALINITY LAB (MG/L AS CACO3) (90410)	SULFATE DISSOLVED (MG/L AS SO4) (00945)	CHLORIDE, DISSOLVED (MG/L AS CL) (00940)	NITROGEN, NITRITE TOTAL (MG/L AS N) (00615)	NITROGEN, NITRITE DISSOLVED (MG/L AS N) (00613)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) (00631)
JUN									
15...	17	11	130	24	40	0.010	<0.010	<0.020	0.030

DATE	NITROGEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N) (00608)	NITROGEN,AMMONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITROGEN,AMMONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOSPHOROUS TOTAL (MG/L AS P) (00665)	PHOSPHOROUS DISSOLVED (MG/L AS P) (00666)	PHOSPHORUS, ORTHO, TOTAL (MG/L AS P) (70507)	PHOSPHOROUS ORTHO, DISSOLVED (MG/L AS P) (00671)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
JUN									
15...	0.010	0.030	5.7	2.0	0.170	0.020	0.030	<0.010	24

DATE	TIME	NITROGEN, NO2+NO3 TOT. IN BOT MAT (MG/KG AS N) (00633)	NITROGEN,NH4 TOTAL IN BOT. MAT. (MG/KG AS N) (00611)	NITROGEN,NH4 + ORG. TOT IN BOT MAT (MG/KG AS N) (00626)	PHOSPHOROUS TOTAL IN BOT. MAT. (MG/KG AS P) (00668)	CARBON, INORG + ORGANIC TOT. IN BOT MAT (MG/KG AS C) (00693)	CARBON, INORGANIC, TOT IN BOT MAT (G/KG AS C) (00686)
JUN							
15...	1105	2.0	140	29000	150	390	0.1

284021081404400 - APOPKA-BEAUCLAIR CANAL INLET AT LAKE APOPKA NEAR ASTATULA

DATE	TIME	SPECIFIC CONDUCTANCE (US/CM) (00095)	PH (STANDARD UNITS) (00400)	TEMPERATURE WATER (DEG C) (00010)	COLOR (PLATINUM-COBALT UNITS) (00080)	TURBIDITY (NTU) (00076)	OXYGEN, DISSOLVED (MG/L) (00300)	CALCIUM DISSOLVED (MG/L AS CA) (00915)	MAGNESIUM, DISSOLVED (MG/L AS MG) (00925)
JUN 15...	1220	421	9.0	30.0	20	16	8.2	34	19
AUG 15...	0855	417	--	27.5	--	--	--	--	--

DATE	SODIUM, DISSOLVED (MG/L AS NA) (00930)	POTASSIUM, DISSOLVED (MG/L AS K) (00935)	ALKALINITY LAB (MG/L AS CACO3) (90410)	SULFATE DISSOLVED (MG/L AS SO4) (00945)	CHLORIDE, DISSOLVED (MG/L AS CL) (00940)	NITROGEN, NITRITE TOTAL (MG/L AS N) (00615)	NITROGEN, NITRITE DISSOLVED (MG/L AS N) (00613)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) (00631)
JUN 15...	21	12	130	25	41	<0.010	<0.010	<0.020	<0.020
AUG 15...	--	--	--	--	--	0.070	--	0.890	--

DATE	NITROGEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N) (00608)	NITROGEN,AMMONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITROGEN,AMMONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOSPHOROUS TOTAL (MG/L AS P) (00665)	PHOSPHOROUS DISSOLVED (MG/L AS P) (00666)	PHOSPHORUS, ORTHO, TOTAL (MG/L AS P) (70507)	PHOSPHOROUS ORTHO, DISSOLVED (MG/L AS P) (00671)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
JUN 15...	0.020	0.010	7.0	1.7	0.170	0.020	0.030	<0.010	28
AUG 15...	0.260	--	3.7	--	0.390	--	0.190	--	--

DATE	TIME	NITROGEN, NO2+NO3 TOT. IN BOT MAT (MG/KG AS N) (00633)	NITROGEN,NH4 TOTAL IN BOT. MAT. (MG/KG AS N) (00611)	NITROGEN,NH4 + ORG. TOT IN BOT MAT (MG/KG AS N) (00626)	PHOSPHOROUS TOTAL IN BOT. MAT. (MG/KG AS P) (00668)	CARBON, INORG + ORGANIC TOT. IN BOT MAT (MG/KG AS C) (00693)	CARBON, INORGANIC, TOT IN BOT MAT (G/KG AS C) (00686)
JUN 15...	1220	10	55	29000	480	410	3.6

284046081404600 - APOPKA-BEAUCLAIR CANAL 0.5 MI BELOW LAKE APOPKA NEAR ASTATULA

DATE	TIME	SPECIFIC CONDUCTANCE (US/CM) (00095)	PH (STANDARD UNITS) (00400)	TEMPERATURE WATER (DEG C) (00010)	COLOR (PLATINUM-COBALT UNITS) (00080)	TURBIDITY (NTU) (00076)	OXYGEN, DISSOLVED (MG/L) (00300)	CALCIUM DISSOLVED (MG/L AS CA) (00915)	MAGNESIUM, DISSOLVED (MG/L AS MG) (00925)
JUN 15...	1325	425	8.9	31.0	30	16	7.4	34	19

DATE	SODIUM, DISSOLVED (MG/L AS NA) (00930)	POTASSIUM, DISSOLVED (MG/L AS K) (00935)	ALKALINITY LAB (MG/L AS CACO3) (90410)	SULFATE DISSOLVED (MG/L AS SO4) (00945)	CHLORIDE, DISSOLVED (MG/L AS CL) (00940)	NITROGEN, NITRITE TOTAL (MG/L AS N) (00615)	NITROGEN, NITRITE DISSOLVED (MG/L AS N) (00613)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) (00631)
JUN 15...	20	12	131	23	41	0.010	<0.010	<0.020	<0.020

DATE	NITROGEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N) (00608)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOSPHOROUS TOTAL (MG/L AS P) (00665)	PHOSPHOROUS DISSOLVED (MG/L AS P) (00666)	PHOSPHORUS, ORTHO, TOTAL (MG/L AS P) (70507)	PHOSPHOROUS ORTHO, DISSOLVED (MG/L AS P) (00671)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
JUN 15...	0.010	0.010	5.6	1.8	0.200	0.020	0.030	<0.010	29

DATE	TIME	NITROGEN, NO2+NO3 TOT. IN BOT MAT (MG/KG AS N) (00633)	NITROGEN,NH4 TOTAL IN BOT. MAT. (MG/KG AS N) (00611)	NITROGEN,NH4 + ORG. TOT IN BOT MAT (MG/KG AS N) (00626)	PHOSPHOROUS TOTAL IN BOT. MAT. (MG/KG AS P) (00668)	CARBON, INORG + ORGANIC TOT. IN BOT MAT (MG/KG AS C) (00693)	CARBON, INORGANIC, TOT IN BOT MAT (G/KG AS C) (00686)
JUN 15...	1325	2.0	24	28000	430	400	2.3

MISCELLANEOUS SURFACE WATER QUALITY RECORDS
OCTOBER 1988 TO SEPTEMBER 1989

284046081404601 - APOPKA-BEAUCLAIR CANAL AT CONSTRICTION

DATE	TIME	GAGE HEIGHT (FEET) (00065)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	OXYGEN, DIS-SOLVED (MG/L) (00300)	NITRO-GEN, NITRITE TOTAL (MG/L AS N) (00615)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)
NOV										
07...	1100	46.03	392	--	21.0	6.4	<0.010	<0.010	<0.020	<0.020
21...	1035	45.94	379	--	25.0	5.6	<0.010	<0.010	<0.020	<0.020
DEC										
19...	1000	46.43	364	--	11.0	12.2	0.010	<0.010	<0.020	<0.020
JAN										
06...	1005	46.48	370	--	18.0	9.1	<0.010	<0.010	<0.020	<0.020
19...	1000	46.37	374	--	19.5	8.1	0.010	<0.010	0.020	<0.020
FEB										
07...	1012	46.70	369	--	24.0	9.2	0.010	<0.010	<0.020	<0.020
23...	1030	46.26	373	8.2	18.0	4.5	0.010	0.010	0.080	0.070
MAR										
16...	0900	46.39	374	9.3	22.5	11.8	<0.010	<0.010	<0.020	<0.020
30...	1030	46.38	360	9.2	25.5	7.1	0.010	<0.010	<0.020	<0.020
APR										
13...	1030	46.13	370	--	20.0	9.4	<0.010	0.010	0.020	<0.020
MAY										
04...	0915	46.30	372	--	24.5	6.1	<0.010	<0.010	<0.020	0.020
16...	0955	46.05	387	8.7	27.5	5.1	<0.010	<0.010	<0.020	<0.020
JUN										
29...	0833	45.81	460	8.0	30.0	2.0	0.130	0.130	1.20	1.20
JUL										
17...	0915	45.94	431	8.3	30.5	5.4	0.010	<0.010	<0.020	0.040
26...	0855	45.94	478	8.0	29.0	4.9	0.040	0.040	0.560	0.560
AUG										
01...	0950	45.87	405	--	29.5	2.8	0.010	0.010	0.020	0.030
11...	0930	45.72	406	--	28.0	--	0.010	<0.010	<0.020	<0.020
14...	1020	45.96	440	--	28.0	--	0.010	--	0.100	--
15...	0910	45.93	461	--	28.0	--	0.030	--	0.080	--
SEP										
14...	0930	45.88	390	7.8	29.0	--	0.010	0.010	0.030	0.030
28...	0915	46.20	433	7.5	28.0	--	0.060	0.060	0.850	0.860

DATE	NITRO-GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS-PHOROUS TOTAL (MG/L AS P) (00665)	PHOS-PHOROUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS, ORTHO, TOTAL (MG/L AS P) (70507)	PHOS-PHOROUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)
NOV									
07...	<0.010	<0.010	5.3	5.3	1.8	0.090	0.030	0.050	0.010
21...	0.010	0.010	3.5	3.5	1.8	0.120	0.020	0.060	0.010
DEC									
19...	0.010	0.010	4.5	4.5	1.7	0.180	0.020	0.060	0.010
JAN									
06...	0.010	0.010	4.8	4.8	1.7	0.180	<0.020	0.060	0.010
19...	0.010	<0.010	4.5	4.5	1.6	0.200	<0.020	0.050	0.010
FEB									
07...	<0.010	<0.010	2.8	2.8	1.2	0.180	<0.020	0.060	0.010
23...	0.010	0.010	3.7	3.7	1.7	0.230	<0.020	0.040	<0.010
MAR									
16...	0.010	<0.010	3.8	3.8	1.6	0.160	<0.020	0.060	0.010
30...	<0.010	<0.010	4.3	4.3	1.8	0.170	<0.020	0.040	0.010
APR									
13...	<0.010	<0.010	6.4	6.4	1.7	--	0.260	--	0.060
MAY									
04...	0.010	0.010	5.3	5.3	1.6	0.270	0.020	0.050	<0.010
16...	0.010	0.010	5.8	5.8	1.6	0.210	0.050	<0.010	<0.010
JUN									
29...	0.180	0.180	4.7	4.9	2.2	0.390	0.060	0.140	0.050
JUL									
17...	0.030	0.020	4.7	4.7	1.3	0.290	0.150	0.060	0.010
26...	0.060	0.060	4.7	4.8	2.0	0.300	0.040	0.090	0.010
AUG									
01...	0.110	0.120	3.9	4.0	2.6	0.910	0.710	0.760	0.690
11...	0.010	0.020	4.2	4.2	1.6	0.240	<0.020	0.080	0.010
14...	0.030	--	4.0	4.0	--	0.740	--	0.530	--
15...	0.070	--	4.0	4.1	--	0.910	--	0.760	--
SEP									
14...	<0.010	0.010	3.5	3.5	2.0	0.310	0.020	0.080	0.010
28...	0.460	0.440	3.3	3.8	2.8	0.430	0.230	0.260	0.220

284046081404601 - APOPKA-BEAUCLAIR CANAL AT CONSTRICTION--Continued

DATE	TIME	COLOR (PLAT-INUM-COBALT UNITS) (00080)	TUR-BID-ITY (NTU) (00076)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
NOV 07...	1100	40	5.7	160	33	18	16	12	123	22	38	17
DEC 19...	1000	30	18	140	28	16	15	11	115	21	36	23
JAN 19...	1000	20	23	140	28	16	15	12	115	19	39	23
FEB 23...	1030	60	10	150	34	15	12	9.2	120	20	32	22
MAR 16...	0900	30	18	150	31	17	15	11	122	21	35	E24
APR 13...	1030	70	20	140	28	17	17	11	117	21	37	17
MAY 16...	0955	30	12	150	31	17	17	11	119	21	38	36
JUL 17...	0915	100	18	170	38	18	16	11	135	23	37	29
SEP 14...	0930	100	8.6	150	33	17	14	10	129	30	33	32

284140081405402 - APOPKA-BEAUCLAIR CANAL AT DUDA BR N.POND NEAR ASTATULA

DATE	TIME	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	COLOR (PLAT-INUM-COBALT UNITS) (00080)	TUR-BID-ITY (NTU) (00076)	OXYGEN, DIS-SOLVED (MG/L) (00300)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)
JUN 15...	1443	435	8.9	30.5	30	14	8.0	35	19

DATE	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	NITRO-GEN, NITRITE TOTAL (MG/L AS N) (00615)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)
JUN 15...	17	12	133	24	41	0.010	<0.010	<0.020	0.020

DATE	NITRO-GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS-PHOROUS TOTAL (MG/L AS P) (00665)	PHOS-PHOROUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS, ORTHO, TOTAL (MG/L AS P) (70507)	PHOS-PHOROUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
JUN 15...	0.010	0.010	5.5	2.0	0.200	0.020	0.030	<0.010	28

DATE	TIME	NITRO-GEN, NO2+NO3 TOT. IN BOT MAT (MG/KG AS N) (00633)	NITRO-GEN,NH4 TOTAL IN BOT. MAT. (MG/KG AS N) (00611)	NITRO-GEN,NH4 + ORG. TOT IN BOT MAT (MG/KG AS N) (00626)	PHOS-PHOROUS TOTAL IN BOT. MAT. (MG/KG AS P) (00668)	CARBON, INORG + ORGANIC TOT. IN BOT MAT (MG/KG AS C) (00693)	CARBON, INOR-GANIC, TOT IN BOT MAT (G/KG AS C) (00686)
JUN 15...	1443	4.0	38	7100	120	120	15

MISCELLANEOUS SURFACE WATER QUALITY RECORDS
OCTOBER 1988 TO SEPTEMBER 1989

284419081412100 - APOPKA-BEAUCLAIR CANAL AT SR448 BRIDGE NEAR ASTATULA

DATE	TIME	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	COLOR (PLAT-INUM-COBALT UNITS) (00080)	TUR-BID-ITY (NTU) (00076)	OXYGEN, DIS-SOLVED (MG/L) (00300)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)
JUN									
15...	1745	442	8.8	32.5	40	6.0	10.6	37	19

DATE	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	NITRO-GEN, NITRITE TOTAL (MG/L AS N) (00615)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)
JUN									
15...	16	12	130	23	40	<0.010	<0.010	<0.020	<0.020

DATE	NITRO-GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS-PHOROUS TOTAL (MG/L AS P) (00665)	PHOS-PHOROUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS, ORTHO, TOTAL (MG/L AS P) (70507)	PHOS-PHOROUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
JUN									
15...	0.020	0.020	5.2	1.9	0.250	0.020	0.040	<0.010	26

DATE	TIME	NITRO-GEN, NO2+NO3 TOT. IN BOT MAT (MG/KG AS N) (00633)	NITRO-GEN,NH4 TOTAL IN BOT. MAT. (MG/KG AS N) (00611)	NITRO-GEN,NH4 + ORG. TOT IN BOT MAT (MG/KG AS N) (00626)	PHOS-PHOROUS TOTAL IN BOT. MAT. (MG/KG AS P) (00668)	CARBON, INORG + ORGANIC TOT. IN BOT MAT (MG/KG AS C) (00693)	CARBON, INOR-GANIC, TOT IN BOT MAT (G/KG AS C) (00686)
JUN							
15...	1745	<2.0	6.0	200	54	16	<0.1

MISCELLANEOUS SURFACE WATER QUALITY RECORDS
OCTOBER 1988 TO SEPTEMBER 1989

284557081403300 - APOPKA-BEAUCLAIR CANAL OUTLET AT LAKE BEAUCLAIR NEAR MOUNT DORA

DATE	TIME	SPECIFIC CONDUCTANCE (US/CM) (00095)	PH (STANDARD UNITS) (00400)	TEMPERATURE WATER (DEG C) (00010)	COLOR (PLATINUM-COBALT UNITS) (00080)	TURBIDITY (NTU) (00076)	OXYGEN, DISSOLVED (MG/L) (00300)	CALCIUM DISSOLVED (MG/L AS CA) (00915)	MAGNESIUM, DISSOLVED (MG/L AS MG) (00925)
JUN									
15...	1700	460	8.2	31.0	60	10	8.0	40	18

DATE	SODIUM, DISSOLVED (MG/L AS NA) (00930)	POTASSIUM, DISSOLVED (MG/L AS K) (00935)	ALKALINITY LAB (MG/L AS CACO3) (90410)	SULFATE DISSOLVED (MG/L AS SO4) (00945)	CHLORIDE, DISSOLVED (MG/L AS CL) (00940)	NITROGEN, NITRITE TOTAL (MG/L AS N) (00615)	NITROGEN, NITRITE DISSOLVED (MG/L AS N) (00613)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) (00631)
JUN									
15...	17	15	141	22	41	0.010	<0.010	<0.020	<0.020

DATE	NITROGEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N) (00608)	NITROGEN,AMMONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITROGEN,AMMONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOSPHOROUS TOTAL (MG/L AS P) (00665)	PHOSPHOROUS DISSOLVED (MG/L AS P) (00666)	PHOSPHORUS, ORTHO, TOTAL (MG/L AS P) (70507)	PHOSPHOROUS ORTHO, DISSOLVED (MG/L AS P) (00671)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
JUN									
15...	0.020	0.020	5.0	2.0	0.300	0.030	0.050	<0.010	26

DATE	TIME	NITROGEN, NO2+NO3 TOT. IN BOT MAT (MG/KG AS N) (00633)	NITROGEN,NH4 TOTAL IN BOT. MAT. (MG/KG AS N) (00611)	NITROGEN,NH4 + ORG. TOT IN BOT MAT (MG/KG AS N) (00626)	PHOSPHOROUS TOTAL IN BOT. MAT. (MG/KG AS P) (00668)	CARBON, INORG + ORGANIC TOT. IN BOT MAT (MG/KG AS C) (00693)	CARBON, INORGANIC, TOT IN BOT MAT (G/KG AS C) (00686)
JUN							
15...	1700	12	150	21000	480	380	0.2

MISCELLANEOUS SURFACE WATER QUALITY RECORDS
OCTOBER 1988 TO SEPTEMBER 1989

284623081394700 - LAKE BEAUCLAIR AT CENTER NEAR MOUNT DORA

DATE	TIME	SPECIFIC CONDUCTANCE (US/CM) (00095)	PH (STANDARD UNITS) (00400)	TEMPERATURE WATER (DEG C) (00010)	COLOR (PLATINUM-COBALT UNITS) (00080)	TURBIDITY (NTU) (00076)	OXYGEN, DISSOLVED (MG/L) (00300)	CALCIUM DISSOLVED (MG/L AS CA) (00915)	MAGNESIUM, DISSOLVED (MG/L AS MG) (00925)
JUN									
15...	1630	412	9.2	31.0	50	11	11.0	35	17

DATE	SODIUM, DISSOLVED (MG/L AS NA) (00930)	POTASSIUM, DISSOLVED (MG/L AS K) (00935)	ALKALINITY LAB (MG/L AS CACO3) (90410)	SULFATE DISSOLVED (MG/L AS SO4) (00945)	CHLORIDE, DISSOLVED (MG/L AS CL) (00940)	NITROGEN, NITRITE TOTAL (MG/L AS N) (00615)	NITROGEN, NITRITE DISSOLVED (MG/L AS N) (00613)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) (00631)
JUN									
15...	16	12	129	23	39	0.010	<0.010	<0.020	<0.020

DATE	NITROGEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N) (00608)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOSPHOROUS TOTAL (MG/L AS P) (00665)	PHOSPHOROUS DISSOLVED (MG/L AS P) (00666)	PHOSPHORUS, ORTHO, TOTAL (MG/L AS P) (70507)	PHOSPHOROUS ORTHO, DISSOLVED (MG/L AS P) (00671)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
JUN									
15...	0.020	0.010	5.8	1.8	0.110	0.020	0.020	<0.010	26

DATE	TIME	NITROGEN, NO2+NO3 TOT. IN BOT MAT (MG/KG AS N) (00633)	NITROGEN, NH4 TOTAL IN BOT. MAT. (MG/KG AS N) (00611)	NITROGEN, NH4 + ORG. TOT IN BOT MAT (MG/KG AS N) (00626)	PHOSPHOROUS TOTAL IN BOT. MAT. (MG/KG AS P) (00668)	CARBON, INORG + ORGANIC TOT. IN BOT MAT (MG/KG AS C) (00693)	CARBON, INORGANIC, TOT IN BOT MAT (G/KG AS C) (00686)
JUN							
15...	1630	2.0	8.8	260	49	2.3	<0.1

MISCELLANEOUS SURFACE WATER QUALITY RECORDS
OCTOBER 1988 TO SEPTEMBER 1989

The following data were collected in conjunction with an investigative study in Ocala.

291126082075700 - TUSKAWILLA LAKE NEAR DW 31 INTAKE, OCALA

DATE	TIME	SPECIFIC CONDUCTANCE (US/CM) (00095)	PH LAB (STANDARD UNITS) (00403)	COLOR (PLATINUM-COBALT UNITS) (00080)	TURBIDITY (NTU) (00076)	COLIFORM, TOTAL, IMMED. (COLS. PER 100 ML) (31501)	COLIFORM, FECAL, 0.7 UM-MF (COLS./100 ML) (31625)	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	CALCIUM DISSOLVED (MG/L AS CA) (00915)	MAGNESIUM, DISSOLVED (MG/L AS MG) (00925)	SODIUM, DISSOLVED (MG/L AS NA) (00930)
MAR 13...	1115	283	6.72	20	6.0	6000	1000	<1	E39	E4.8	E12

DATE	POTASSIUM, DISSOLVED (MG/L AS K) (00935)	ALKALINITY LAB (MG/L AS CACO3) (90410)	SULFATE DISSOLVED (MG/L AS SO4) (00945)	CHLORIDE, DISSOLVED (MG/L AS CL) (00940)	FLUORIDE, DISSOLVED (MG/L AS F) (00950)	SILICA, DISSOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L) (70300)	NITROGEN, NITRATE TOTAL (MG/L AS N) (00620)	NITROGEN, NITRITE TOTAL (MG/L AS N) (00615)	NITROGEN, NITRITE DISSOLVED (MG/L AS N) (00613)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N) (00630)
MAR 13...	E7.3	76	24	22	0.40	<0.10	195	0.310	0.070	0.070	0.380

DATE	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) (00631)	NITROGEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N) (00608)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOSPHOROUS TOTAL (MG/L AS P) (00665)	PHOSPHOROUS DISSOLVED (MG/L AS P) (00666)	PHOSPHORUS, ORTHO, TOTAL (MG/L AS P) (70507)	PHOSPHOROUS ORTHO, DISSOLVED (MG/L AS P) (00671)	ARSENIC TOTAL (UG/L AS AS) (01002)
MAR 13...	0.910	<0.010	0.020	3.3	0.87	0.410	0.080	0.040	0.030	<1

DATE	CADMIUM TOTAL RECOVERABLE (UG/L AS CD) (01027)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR) (01034)	COPPER, TOTAL RECOVERABLE (UG/L AS CU) (01042)	IRON, TOTAL RECOVERABLE (UG/L AS FE) (01045)	LEAD, TOTAL RECOVERABLE (UG/L AS PB) (01051)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN) (01055)	MERCURY TOTAL RECOVERABLE (UG/L AS HG) (71900)	SELENIUM, TOTAL (UG/L AS SE) (01147)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN) (01092)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
MAR 13...	<1	<10	5	230	<5	80	<0.10	<1	60	7.5

291130082075800 - TUSKAWILLA LAKE, CENTER, OCALA, FL

DATE	TIME	SPECIFIC CONDUCTANCE (US/CM) (00095)	PH LAB (STANDARD UNITS) (00403)	COLOR (PLATINUM-COBALT UNITS) (00080)	TURBIDITY (NTU) (00076)	COLIFORM, TOTAL, IMMED. (COLS. PER 100 ML) (31501)	COLIFORM, FECAL, 0.7 UM-MF (COLS./100 ML) (31625)	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	CALCIUM DISSOLVED (MG/L AS CA) (00915)	MAGNESIUM, DISSOLVED (MG/L AS MG) (00925)	SODIUM, DISSOLVED (MG/L AS NA) (00930)
MAR 13...	1130	280	6.77	20	3.9	7000	<1	<1	E40	E4.9	E12
APR 05...	1300	360	7.14	--	--	--	--	--	42	6.6	18

DATE	POTASSIUM, DISSOLVED (MG/L AS K) (00935)	ALKALINITY LAB (MG/L AS CACO3) (90410)	SULFATE DISSOLVED (MG/L AS SO4) (00945)	CHLORIDE, DISSOLVED (MG/L AS CL) (00940)	FLUORIDE, DISSOLVED (MG/L AS F) (00950)	SILICA, DISSOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L) (70300)	NITROGEN, NITRATE TOTAL (MG/L AS N) (00620)	NITROGEN, NITRITE TOTAL (MG/L AS N) (00615)	NITROGEN, NITRITE DISSOLVED (MG/L AS N) (00613)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N) (00630)
MAR 13...	E7.4	77	23	22	0.50	<0.10	164	0.270	0.070	0.070	0.340
APR 05...	8.3	104	29	30	0.40	2.0	249	--	--	--	--

291130082075800 - TUSKAWILLA LAKE, CENTER, OCALA--Continued

DATE	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) (00631)	NITROGEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N) (00608)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOSPHOROUS TOTAL (MG/L AS P) (00665)	PHOSPHOROUS DISSOLVED (MG/L AS P) (00666)	PHOSPHORUS, ORTHO, TOTAL (MG/L AS P) (70507)	PHOSPHOROUS ORTHO, DISSOLVED (MG/L AS P) (00671)	ARSENIC TOTAL (UG/L AS AS) (01002)
MAR 13...	0.340	0.030	0.010	3.3	0.69	0.400	0.060	0.050	0.020	<1

DATE	CADMIUM TOTAL RECOVERABLE (UG/L AS CD) (01027)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR) (01034)	COPPER, TOTAL RECOVERABLE (UG/L AS CU) (01042)	IRON, TOTAL RECOVERABLE (UG/L AS FE) (01045)	LEAD, TOTAL RECOVERABLE (UG/L AS PB) (01051)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN) (01055)	MERCURY TOTAL RECOVERABLE (UG/L AS HG) (71900)	SELENIUM, TOTAL (UG/L AS SE) (01147)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN) (01092)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
MAR 13...	<1	<10	6	250	<5	80	<0.10	<1	30	6.7

DATE	TIME	HARDNESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DISSOLVED (MG/L AS CA) (00915)	MAGNESIUM, DISSOLVED (MG/L AS MG) (00925)	SODIUM, DISSOLVED (MG/L AS NA) (00930)	POTASSIUM, DISSOLVED (MG/L AS K) (00935)	ALKALINITY LAB (MG/L AS CACO3) (90410)	SULFATE DISSOLVED (MG/L AS SO4) (00945)	CHLORIDE, DISSOLVED (MG/L AS CL) (00940)	FLUORIDE, DISSOLVED (MG/L AS F) (00950)
MAR 13...	1130	--	E40	E4.9	E12	E7.4	77	23	22	0.50
APR 05...	1300	130	42	6.6	18	8.3	104	29	30	0.40

DATE	SILICA, DISSOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L) (70301)	PCB, TOTAL (UG/L) (39516)	NAPHTHALENES, POLYCHLOR. TOTAL (UG/L) (39250)	ALDRIN, TOTAL (UG/L) (39330)	CHLORDANE, TOTAL (UG/L) (39350)	DDD, TOTAL (UG/L) (39360)	DDE, TOTAL (UG/L) (39365)	DDT, TOTAL (UG/L) (39370)	DIAZINON, TOTAL (UG/L) (39570)	DIELDRIN TOTAL (UG/L) (39380)
MAR 13...	<0.10	164	--	<0.1	<0.10	<0.010	<0.1	<0.010	<0.010	<0.010	0.08	<0.010
APR 05...	2.0	249	199	--	--	--	--	--	--	--	--	--

DATE	ENDOSULFAN, TOTAL (UG/L) (39388)	ENDRIN, TOTAL (UG/L) (39390)	ETHION, TOTAL (UG/L) (39398)	HEPTACHLOR, TOTAL (UG/L) (39410)	HEPTACHLOR EPOXIDE TOTAL (UG/L) (39420)	MIREX, TOTAL (UG/L) (39755)	LINDANE TOTAL (UG/L) (39340)	MALATHION, TOTAL (UG/L) (39530)	METHOXYCHLOR, TOTAL (UG/L) (39480)	METHYL PARATHION, TOTAL (UG/L) (39600)	METHYL TRITHION, TOTAL (UG/L) (39790)
MAR 13...	<0.010	<0.010	<0.01	<0.010	<0.010	<0.01	<0.010	<0.01	<0.01	<0.01	<0.01

DATE	PARATHION, TOTAL (UG/L) (39540)	PERTHANE TOTAL (UG/L) (39034)	TOXAPHENE, TOTAL (UG/L) (39400)	TOTAL TRITHION (UG/L) (39786)	2,4-D, TOTAL (UG/L) (39730)	2,4,5-T TOTAL (UG/L) (39740)	SILVEX, TOTAL (UG/L) (39760)	2, 4-DP TOTAL (UG/L) (82183)	DICHLOROBROMOMETHANE TOTAL (UG/L) (32101)	CARBONTETRACHLORIDE TOTAL (UG/L) (32102)	1,2-DICHLOROETHANE TOTAL (UG/L) (32103)
MAR 13...	<0.01	<0.1	<1	<0.01	0.05	<0.01	<0.01	<0.01	<0.20	<0.20	<0.20

291130082075800 - TUSKAWILLA LAKE, CENTER, OCALA--Continued

DATE	BROMOFORM TOTAL (UG/L) (32104)	CHLORODIBROMOMETHANE TOTAL (UG/L) (32105)	CHLOROFORM TOTAL (UG/L) (32106)	TOLUENE TOTAL (UG/L) (34010)	BENZENE TOTAL (UG/L) (34030)	CHLOROBENZENE TOTAL (UG/L) (34301)	CHLOROETHANE TOTAL (UG/L) (34311)	ETHYLBENZENE TOTAL (UG/L) (34371)	METHYLBROMIDE TOTAL (UG/L) (34413)	METHYLCHLORIDE TOTAL (UG/L) (34418)	METHYLENE CHLORIDE TOTAL (UG/L) (34423)
MAR											
13...	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20

DATE	TETRACHLOROETHYLENE TOTAL (UG/L) (34475)	TRICHLOROFLUOROMETHANE TOTAL (UG/L) (34488)	1,1-DICHLOROETHANE TOTAL (UG/L) (34496)	1,1-DICHLOROETHYLENE TOTAL (UG/L) (34501)	1,1,1-TRICHLOROETHANE TOTAL (UG/L) (34506)	1,1,2-TRICHLOROETHANE TOTAL (UG/L) (34511)	1,1,2,2 TETRACHLOROETHANE TOTAL (UG/L) (34516)	1,2-DICHLOROBENZENE TOTAL (UG/L) (34536)	1,2-DICHLOROPROPANE TOTAL (UG/L) (34541)	1,2-TRANSDICHLOROETHENE TOTAL (UG/L) (34546)	1,3-DICHLOROPROPENE TOTAL (UG/L) (34561)
MAR											
13...	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20

DATE	1,3-DICHLOROBENZENE TOTAL (UG/L) (34566)	1,4-DICHLOROBENZENE TOTAL (UG/L) (34571)	2-CHLOROETHYLVINYLETHER TOTAL (UG/L) (34576)	DICHLORODIFLUOROMETHANE TOTAL (UG/L) (34668)	TRANS-1,3-DICHLOROPROPENE TOTAL (UG/L) (34699)	CIS 1,3-DICHLOROPROPENE TOTAL (UG/L) (34704)	VINYL CHLORIDE TOTAL (UG/L) (39175)	TRICHLOROETHYLENE TOTAL (UG/L) (39180)	STYRENE TOTAL (UG/L) (77128)	1,2-DIBROMO ETHANE WATER WHOLE TOTAL (UG/L) (77651)	XYLENE TOTAL WATER WHOLE TOT REC (UG/L) (81551)
MAR											
13...	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.2	<0.2	<0.2	<0.2

291132082075600 - TUSKAWILLA LAKE, NEAR DW 32 INTAKE, OCALA

DATE	TIME	SPECIFIC CONDUCTANCE (US/CM) (00095)	PH LAB (STANDARD UNITS) (00403)	COLOR (PLATINUM-COBALT UNITS) (00080)	TURBIDITY (NTU) (00076)	COLIFORM, TOTAL, IMMED. (COLS. PER 100 ML) (31501)	COLIFORM, FECAL, 0.7 UM-MF (COLS./100 ML) (31625)	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	CALCIUM DISSOLVED (MG/L AS CA) (00915)	MAGNESIUM, DISSOLVED (MG/L AS MG) (00925)	SODIUM, DISSOLVED (MG/L AS NA) (00930)
MAR											
13...	1145	280	6.87	20	3.5	4000	<1	1000	E44	E5.3	E12

DATE	POTASSIUM, DISSOLVED (MG/L AS K) (00935)	ALKALINITY LAB (MG/L AS CACO3) (90410)	SULFATE DISSOLVED (MG/L AS SO4) (00945)	CHLORIDE, DISSOLVED (MG/L AS CL) (00940)	FLUORIDE, DISSOLVED (MG/L AS F) (00950)	SILICA, DISSOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L) (70300)	NITROGEN, NITRATE TOTAL (MG/L AS N) (00620)	NITROGEN, NITRITE TOTAL (MG/L AS N) (00615)	NITROGEN, NITRITE DISSOLVED (MG/L AS N) (00613)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N) (00630)
MAR											
13...	E7.5	77	24	25	0.60	<0.10	173	0.300	0.070	0.070	0.370

DATE	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) (00631)	NITROGEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N) (00608)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOSPHOROUS TOTAL (MG/L AS P) (00665)	PHOSPHOROUS DISSOLVED (MG/L AS P) (00666)	PHOSPHORUS, ORTHO, TOTAL (MG/L AS P) (70507)	PHOSPHOROUS ORTHO, DISSOLVED (MG/L AS P) (00671)	ARSENIC TOTAL (UG/L AS AS) (01002)
MAR										
13...	0.330	<0.010	0.010	3.3	0.59	0.360	0.050	0.030	0.020	<1

MISCELLANEOUS SURFACE WATER QUALITY RECORDS
OCTOBER 1988 TO SEPTEMBER 1989

291132082075600 - TUSKAWILLA LAKE, NEAR DW 32 INTAKE, OCALA

DATE	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD) (01027)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR) (01034)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU) (01042)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE) (01045)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB) (01051)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN) (01055)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG) (71900)	SELE-NIUM, TOTAL (UG/L AS SE) (01147)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN) (01092)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
MAR										
13...	<1	<10	5	310	<5	80	<0.10	<1	20	6.6

291137082075300 - TUSKAWILLA LAKE, NEAR DW 29 INTAKE, OCALA

DATE	TIME	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH LAB (STAND-ARD UNITS) (00403)	COLOR (PLAT-INUM-COBALT UNITS) (00080)	TUR-BID-ITY (NTU) (00076)	COLI-FORM, TOTAL, IMMED. (COLS. PER 100 ML) (31501)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)
MAR											
13...	1300	289	6.76	20	4.7	16000	1000	7000	E39	E4.5	E11

DATE	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	NITRO-GEN, NITRATE TOTAL (MG/L AS N) (00620)	NITRO-GEN, NITRITE TOTAL (MG/L AS N) (00615)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)
MAR											
13...	E6.9	80	22	20	0.70	<0.10	188	0.230	0.050	0.030	0.280

DATE	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS-PHOROUS TOTAL (MG/L AS P) (00665)	PHOS-PHOROUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS, ORTHO, TOTAL (MG/L AS P) (70507)	PHOS-PHOROUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	ARSENIC TOTAL (UG/L AS AS) (01002)
MAR										
13...	0.410	0.500	0.460	2.9	0.99	0.530	0.210	0.300	0.190	<1

DATE	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD) (01027)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR) (01034)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU) (01042)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE) (01045)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB) (01051)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN) (01055)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG) (71900)	SELE-NIUM, TOTAL (UG/L AS SE) (01147)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN) (01092)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
MAR										
13...	<1	<10	4	420	<5	170	<0.10	<1	30	8.2

MISCELLANEOUS SURFACE WATER QUALITY RECORDS
OCTOBER 1988 TO SEPTEMBER 1989

The following data were collected in conjunction with a drainage-well study in Orlando.

02262550 - LAKE UNDERHILL AT ORLANDO

DATE	TIME	SPECIFIC CONDUCTANCE (US/CM) (00095)	PH (STANDARD UNITS) (00400)	TEMPERATURE WATER (DEG C) (00010)	HARDNESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DISSOLVED (MG/L AS CA) (00915)	MAGNESIUM, DISSOLVED (MG/L AS MG) (00925)	SODIUM, DISSOLVED (MG/L AS NA) (00930)	POTASSIUM, DISSOLVED (MG/L AS K) (00935)	ALKALINITY LAB (MG/L AS CACO3) (90410)
NOV										
17...	1215	159	8.6	23.5	59	20	2.2	4.8	2.1	46

DATE	SULFATE DISSOLVED (MG/L AS SO4) (00945)	CHLORIDE, DISSOLVED (MG/L AS CL) (00940)	FLUORIDE, DISSOLVED (MG/L AS F) (00950)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L) (70300)	NITROGEN, NITRITE TOTAL (MG/L AS N) (00615)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITROGEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITROGEN,AMMONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOSPHOROUS TOTAL (MG/L AS P) (00665)
NOV									
17...	15	9.3	0.20	104	>0.010	>0.020	0.010	1.1	0.080

DATE	PHOSPHORUS, ORTHO, TOTAL (MG/L AS P) (70507)	IRON, TOTAL RECOVERABLE (UG/L AS FE) (01045)	IRON, DISSOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOVERABLE (UG/L AS PB) (01051)	LEAD, DISSOLVED (UG/L AS PB) (01049)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN) (01055)	MANGANESE, DISSOLVED (UG/L AS MN) (01056)	ZINC, DISSOLVED (UG/L AS ZN) (01090)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
NOV									
17...	0.020	120	10	>5	>5	30	>10	>10	4.7

MISCELLANEOUS SURFACE WATER QUALITY RECORDS
OCTOBER 1988 TO SEPTEMBER 1989

The following data were collected in conjunction with an investigative project in Reedy Creek Improvement District.

02266298 - REEDY CREEK ABOVE HIGHWAY 192 NEAR VINELAND

DATE	TIME	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	COLOR (PLAT-INUM-COBALT UNITS) (00080)	OXYGEN, DIS-SOLVED (MG/L) (00300)	NITRO-GEN, NITRITE TOTAL (MG/L AS N) (00615)
APR							
18...	1345	305	7.0	22.0	400	5.3	0.020

DATE	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS-PHOROUS TOTAL (MG/L AS P) (00665)	PHOS-PHORUS, ORTHO, TOTAL (MG/L AS P) (70507)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
APR							
18...	0.600	0.090	2.2	2.3	0.400	0.320	28

02266320 - REEDY CREEK AT INTERSTATE HIGHWAY 4 NEAR LOUGHMAN

DATE	TIME	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	COLOR (PLAT-INUM-COBALT UNITS) (00080)	OXYGEN, DIS-SOLVED (MG/L) (00300)	NITRO-GEN, NITRITE TOTAL (MG/L AS N) (00615)
APR							
18...	1215	290	6.1	21.0	400	5.1	0.020

DATE	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS-PHOROUS TOTAL (MG/L AS P) (00665)	PHOS-PHORUS, ORTHO, TOTAL (MG/L AS P) (70507)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
APR							
18...	0.540	0.030	1.8	1.9	0.460	0.380	28

282135081345500 - LATERAL 405 BELOW L-410 NEAR VINELAND

DATE	TIME	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	COLOR (PLAT-INUM-COBALT UNITS) (00080)	OXYGEN, DIS-SOLVED (MG/L) (00300)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)
MAR												
13...	0915	174	6.1	17.0	400	4.0	13	4.0	20	6.2	25	12
APR												
18...	1415	329	6.9	22.5	320	5.2	--	--	--	--	--	--
MAY												
08...	0800	260	6.5	21.5	560	3.9	16	4.3	27	8.4	37	15
JUL												
03...	0830	364	6.7	24.5	320	4.5	--	--	--	--	--	--
SEP												
25...	0925	280	6.2	25.0	200	2.5	19	5.3	25	6.1	46	29

282135081345500 - LATERAL 405 BELOW L-410 NEAR VINELAND--Continued

DATE	CHLORIDE, DISSOLVED (MG/L AS CL) (00940)	NITROGEN, NITRITE TOTAL (MG/L AS N) (00615)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITROGEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITROGEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOSPHOROUS TOTAL (MG/L AS P) (00665)	PHOSPHORUS, ORTHO, TOTAL (MG/L AS P) (70507)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	ALUMINUM, TOTAL RECOVERABLE (UG/L AS AL) (01105)	ARSENIC TOTAL (UG/L AS AS) (01002)
MAR											
13...	39	0.020	0.450	0.090	1.5	1.6	0.250	0.240	36	300	<1
APR											
18...	--	0.030	0.800	0.250	1.8	2.1	0.350	0.270	26	--	--
MAY											
08...	46	0.020	0.130	0.020	0.95	0.97	0.260	0.270	32	300	<1
JUL											
03...	--	0.090	0.840	0.220	2.2	2.4	0.380	0.340	28	--	--
SEP											
25...	34	0.010	0.230	0.080	1.1	1.2	0.250	0.200	--	200	2

DATE	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE) (01012)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD) (01027)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR) (01034)	COPPER, TOTAL RECOVERABLE (UG/L AS CU) (01042)	IRON, TOTAL RECOVERABLE (UG/L AS FE) (01045)	LEAD, TOTAL RECOVERABLE (UG/L AS PB) (01051)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN) (01055)	MERCURY TOTAL RECOVERABLE (UG/L AS HG) (71900)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI) (01067)	SELENIUM, TOTAL (UG/L AS SE) (01147)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN) (01092)
MAR											
13...	<10	<1	<10	2	450	<5	15	--	6	<1	20
MAY											
08...	<10	<1	<10	3	420	<5	10	0.30	3	<1	20
SEP											
25...	<10	<1	<10	2	210	<1	10	0.30	<1	<1	10

282136081345500 - LATERAL 405 ABOVE L-410 NEAR VINELAND

DATE	TIME	SPECIFIC CONDUCTANCE (US/CM) (00095)	PH (STANDARD UNITS) (00400)	TEMPERATURE WATER (DEG C) (00010)	COLOR (PLATINUM-COBALT UNITS) (00080)	OXYGEN, DISSOLVED (MG/L) (00300)	NITROGEN, NITRITE TOTAL (MG/L AS N) (00615)
JUL							
03...	0830	364	6.7	24.5	320	4.5	0.090

DATE	NITROGEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITROGEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITROGEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOSPHOROUS TOTAL (MG/L AS P) (00665)	PHOSPHORUS, ORTHO, TOTAL (MG/L AS P) (70507)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
JUL							
03...	0.840	0.220	2.2	2.4	0.380	0.340	28

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

As the number of streams on which streamflow information is likely to be desired far exceeds the number of stream-gaging stations feasible to operate at one time, the Geological Survey collects limited streamflow data at sites other than stream-gaging stations. When limited streamflow data are collected on a systematic basis over a period of years for use in hydrologic analyses, the site at which the data are collected is called a partial-record station. Data collected at these partial-record stations are usable in low-flow or flood-flow analyses, depending on the type of data collected. In addition, discharge measurements are made at other sites not included in the partial-record program. These measurements are generally made in times of drought or flood to give better areal coverage to those events. Those measurements and others collected for some special reason are called measurements at miscellaneous sites.

Records collected at crest-stage partial-record stations are presented in a table of annual maximum stage and discharge. Discharge measurements made at miscellaneous sites for both low flows and high flows are given in a separate table.

Crest-stage partial-record stations

The following table contains annual maximum discharges for crest-stage stations. A crest-stage gage is a device which will register the peak stage occurring between inspections of the gage. A stage-discharge relation for each gage is developed from discharge measurements made by indirect measurements of peak flow or by current meter. The date of the maximum discharge is not always certain but is usually determined by comparison with nearby continuous-record stations, weather records, or local inquiry. Only the maximum discharge for each water year is given. Information on some lower floods may have been obtained but is not published herein. The years given in the period of record represent water years for which the annual maximum has been determined.

Annual maximum discharge at crest-stage partial-record stations during water year 1989

Station No.	Station name	Location	Drainage area (mi^2)	Period of record	Annual Maximum		
					Date	Gage height (ft)	Discharge (ft^3/s)
		ST. MARYS RIVER BASIN					
02231250	Little St. Marys River near Hilliard, FL	Lat 30°43'55", long 81°53'35", in SE¼ sec. 27, T.4 N., R.24 E., Nassau County, Hydrologic Unit 03070204, at bridge on State Highway 115-A, 3.3 mi northeast of Hilliard, and 13 mi upstream from mouth. Datum of gage is National Geodetic Vertical Datum of 1929. Prior to 1965, at datum 8.56 ft higher.	19.8	1961-65 1965-67‡ 1968-89	10-05-88	13.64	357
		ST. JOHNS RIVER BASIN ABOVE OKLAWAHA RIVER					
02231386	Cow Log Branch at Highway 441 near Yeehaw Junction, FL	Lat 27°39'46", long 80°53'09", in SW¼ sec.25, T.32 S., R.34 E., Osceola County, Hydrologic Unit 03080101, on downstream side of bridge on U.S. Highway 441, 2.8 mi southeast of Yeehaw Junction, and 4.3 mi upstream from mouth.	7.90	1983-89	9-27-89	6.28	69
02232505	Savage Creek near Christmas, FL	Lat 28°32'22", long 81°01'10", in NE¼ sec.33, T.22 S., R.33 E., Orange County, Hydrologic Unit 03080101, on downstream side at bridge on Highway 420, 3.1 mi upstream from mouth, and 0.2 mi north of Christmas and Highway 50. Datum of gage is 28.95 ft above National Geodetic Vertical Datum of 1929.	3.69	1985-89	11-23-88	6.35	275
		OKLAWAHA RIVER BASIN					
02240920	Fairfield Sink drain at Fairfield, FL	Lat 29°21'58", long 82°15'17", NW¼ sec.18, T.13 S., R.21 E., Marion County, Hydrologic Unit 03080102, on right bank of drainage ditchs, 50 ft downstream from culvert on State Highway 316, approximately 450 ft upstream of sink, and 0.2 mi west of intersection of State Highways 316 and 225 at Fairfield. Datum of gage is 78.19 ft above National Geodetic Vertical Datum of 1929.	1.70	1986-89	7-24-89	21.87	52
		ST. JOHNS RIVER BASIN BELOW OKLAWAHA RIVER					
02246100	Julington Creek near Greenland, FL	Lat 30°11'19", long 81°33'45", Land grant 50, T.4S., R.27E., Duval County, Hydrologic Unit 03080103, at culvert on U.S. Highway 1, 11.0 mi upstream from mouth, and 1.5 mi northwest of Greenland. Datum of gage is National Geodetic Vertical Datum of 1929.	8.9	1965-67 1974-89	9-09-88	13.75	306

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‡ Operated as a continuous record gaging station

Crest-stage partial-record stations--Continued

Annual maximum discharge at crest-stage partial-record stations during water year 1989

Station No.	Station name	Location	Drainage area (mi^2)	Period of record	Annual Maximum		
					Date	Gage height (ft)	Dis-charge (ft^3/s)
		ST. JOHNS RIVER BASIN BELOW OKLAWAHA RIVER--Continued					
02246200	Durbin Creek near Durbin, FL	Lat 30°05'57", long 81°31'34", in NE¼ sec. 6, T. 5 S., R. 28 E., St. Johns County, Hydrologic Unit 03080103, at bridge on county road, 1.0 mi downstream from Bowden Branch, 6.1 mi upstream from mouth, and 4.9 mi northwest of Durbin, FL.	36.7	1961-89	9-29-89	5.21	252
02246460	Williamson Creek at Cedar Hills, FL	Lat 30°16'19", long 81°45'05", in land grant 37, T.3 S., R.25 E., Duval County, Hydrologic Unit 03080103, at culvert on Hugh Edwards Drive at Cedar Hills, and 0.9 mi upstream from mouth. Datum of gage not determined.	0.92	1971-89	9-29-89	13.16	256
		COASTAL AREA BETWEEN ST. JOHNS RIVER AND PONCE DE LEON INLET					
02247200	Fish Swamp Outlet near Summer Haven, FL	Lat 29°39'20", long 81°19'43", in SE¼ sec.27, T.10 S., R.29 E., St. Johns County, Hydrologic Unit 03080201 at culvert on State Highway 204, 0.2 mi upstream from mouth and 7.7 mi southwest of Summer Haven. Datum of gage is 19.14 ft National Geodetic Vertical Datum of 1929.	4.62	1962-89	11-23-88	3.55	60
		KISSIMMEE RIVER BASIN					
02269720	Morgan Hole Creek near Avon Park, FL	Lat 27°37'52, long 81°17'47", in NW¼ sec.11,rT.33 S., R.30 E., Highlands County, Hydrologic Unit 03090101, at bridge on perimeter road on Avon Park bombing range, 5.4 mi upstream from mouth and 12.5 mi east of Avon Park. Datum of gage is 53.15 ft above National Geodetic Vertical Datum of 1929.	13.9	1971-89	8-28-89	4.54	[a]95

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[a] Maximum measured, peak not recovered.

Discharge measurements made at low-flow partial-record stations during water year 1989

Station No.	Station name	Location	Drainage area (mi^2)	Measured previously (water years)	Measurements Date	Measurements Discharge (ft^3/s)
		ST. JOHNS RIVER BASIN ABOVE OKLAWAHA RIVER				
02231396	Blue Cypress Creek near Fellsmere, FL	Lat 27°43'40", long 81°48'49", in NW¼ sec.2, T.32 S., R.35 E., Indian River County, Hydrologic Unit 03080101, at culvert on private road, 2.0 mi upstream from Blue Cypress Lake, and 12.8 mi west of Fellsmere.	105	1969-70	11-15-88	2.3
				1985	4-20-89	1.3
				1987-88		
02231475	Bull Creek near Holopaw, FL	Lat 28°01'53", long 81°02'21", in SE¼ sec.20, T.28 S., R.33 E., Osceola County, Hydrologic Unit 03080101, at bridge on U.S. Highway 441, 7.7 mi south of Holopaw.	31.7	1957	10-13-88	.55
				1965-67	11-30-88	.89
				1972	1-31-89	6.3
				1986-88	3-27-89	.15
					5-17-89	.00
					7-18-89	.00
*02234150	Cow Creek near Maytown, FL	Lat 28°50'13", long 81°01'32", in SE¼ sec.16, T.19 S., R.33 E., Volusia County, Hydrologic Unit 03080101, at bridge on county road, 2.7 mi upstream from mouth, 4.2 mi northwest of Maytown, and 8.2 mi east of Osteen.	23	1964-66	10-21-88	3.8
				1985-88	12-09-88	.00
					4-10-89	3.4
					5-30-89	.00
					7-24-89	.00
					9-26-89	.00
		COASTAL AREA BETWEEN PONCE DE LEON INLET AND SEBASTIAN INLET				
02248300	Little Cow Creek near Edgewater, FL	Lat 28°56'29", long 81°56'30", in SE¼ sec.8, T.18 S., R.34 E., Volusia County, Hydrologic Unit 03080202, at bridge on county road, 4.0 mi southwest of Edgewater.		1965	10-21-88	.40
				1984-89	12-09-88	2.4
					2-08-89	11.2
					4-11-89	.82
					5-30-89	.60
					7-24-89	.07
					9-26-89	2.5

* Also a crest-stage partial-record station.

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

Discharge measurements made at miscellaneous sites during water year 1989

Stream	Tributary to	Location	Drainage area (mi^2)	Measured previously (water years)	Measurements	
					Date	Discharge (ft^3/s)
		ST. JOHNS RIVER BASIN ABOVE OKLAWAHA RIVER				
02234600 Wekiva Springs	Wekiva River	Lat 28°42'43", long 81°27'36", in NE¼ sec.36, T.20 S., R.28 E., Orange County, Hydrologic Unit 03080101, at head of Wekiva River, 4.1 mi northeast of Apopka, FL.		1932-33 1936 1945-46 1956 1960-62 1969-80‡ 1981-88	5-03-89 9-19-89	66 60
02234610 Rock Springs	Rock Springs Run	Lat 28°45'20", long 81°29'58", in NE¼ sec.15, T.20 S., R.28 E., Orange County, Hydrologic Unit 03080101, at head of Rock Springs Run, 5.7 mi north of Apopka, FL.		1931-33 1935-36 1945-46 1956 1960-62 1965-67 1969-88	5-03-89 9-19-89	56 51
02234650 Miami Springs	Unnamed Creek	Lat 28°42'36", long 81°26'34", in NE¼ sec.31, T.20 S., R.29 E., Seminole County, Hydrologic Unit 03080101, at outlet of spring pool, 1,100 ft upstream from Wekiva River, and 5.9 mi west of Longwood, FL.		1945,1960 1973-88	5-03-89 9-19-89	4.6 4.6
02234991 Sanlando Springs	Little Wekiva River	Lat 28°41'19", long 81°23'45", in SE¼ sec.3, T.21 S., R.29 E., Seminole County, Hydrologic Unit 03080101, at north outlet of spring pool, 0.2 mi upstream from Little Wekiva River, and 3.0 mi west of Longwood, FL.		1942,1946 1954,1956 1958,1961 1972-88	5-02-89 9-21-89	18 16
02234992 Little Wekiva River	Wekiva River	Lat 28°41'28", long 81°23'42", in SE¼NE¼ sec.3, T.21 S., R.29 E., Seminole County, Hydrologic Unit 03080101, immediately downstream from Sanlando Springs, and 3.0 mi west of Longwood, FL.		1978-80 1982 1984-88	5-02-89 9-21-89	30 31
02234996 Palm Springs	Little Wekiva River	Lat 28°41'27", long 81°23'34", in NW¼ sec.2, T.21 S., R.29 E., Seminole County, Hydrologic Unit 03080101, at outlet of spring pool, 200 ft upstream from Little Wekiva River, and 2.9 mi west of Longwood, FL.		1942,1954 1956,1961 1972-88	5-02-89 9-21-89	5.8 5.6
02234997 Starbuck Spring	Little Wekiva River	Lat 28°41'48", long 81°23'28", in NW¼ sec.2, T.21 S., R.29 E., Seminole County, Hydrologic Unit 03080101, at outlet of spring pool, at edge of Little Wekiva River, and 2.7 mi west of Longwood, FL.		1944,1961 1972-88	5-08-89 9-21-89	12 14
02235250 Seminole Springs	Seminole Creek	Lat 28°50'44", long 81°31'22", in SW¼ sec.9, T.19 S., R.28 E., Lake County, Hydrologic Unit 03080101, 0.2 mi below head of Seminole Springs, and 3.5 mi northeast of Sorrento, FL.		1931-33 1946,1974 1981-83 1985-88	5-04-89	36
02235255 Messant Springs[a]	Seminole Creek	Lat 28°51'21", long 81°29'56", in Theresa Rodriquez Grant, T.19 S., R.28 E., Lake County, Hydrologic Unit 03080101, at head of Messant Spring Run, 5.1 mi northeast of Sorrento, FL.		1946,1961 1972 1981-83 1985-88	5-04-89	14

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‡ Operated as a periodic station

[a] Published as Messinger Springs in 1961 water year

Discharge measurements made at miscellaneous sites during water year 1989--Continued

Stream	Tributary to	Location	Drainage area (mi²)	Measured previously (water years)	Measurements	
					Date	Discharge (ft³/s)
		ST. JOHNS RIVER BASIN ABOVE OKLAWAHA RIVER--Continued				
02236095 Alexander Springs	St. Johns River	Lat 29°04'50", long 81°34'30", in Levy Land Grant, T.16 S., R.27 E., Lake County, Hydrologic Unit 03080101, at head of Alexander Springs Creek, 1.5 mi upstream from bridge on State Highway 445, and 6.5 mi southwest of Astor, FL.		1931,1933 1935-36 1946,1956 1961 1966-67 1969,1972 1977 1981-88	5-04-89 9-21-89	97 94
02236110 Ponce DeLeon Springs	Spring Garden Creek	Lat 29°08'02", long 81°21'47", in land grant 42, T.16 S., R.29 E., Volusia County, Hydrologic Unit 03080101, at weir outlets to Spring Garden Lake, 1.8 mi upstream from Deep Creek, and 8.1 mi northwest of De Land, FL.		1929,1932 1946-47 1956,1961 1965-80‡ 1981-88	5-04-89 9-21-89	26 25
02236130 Juniper Springs	Lake George	Lat 29°11'01", long 81°42'45", in SE¼ sec.17, T.15 S., R.26 E., Marion County, Hydrologic Unit 03080101, at head of Juniper Creek, 4.3 mi west of the intersection of State Highways 19 and 40, 9.3 mi upstream from Lake George, and 26.1 mi east of Ocala, FL.		1929 1935-37 1946,1956 1961,1972 1981-88	5-04-89 9-22-89	11 10
02236132 Fern Hammock Springs b/	Juniper Creek	Lat 29°11'00", long 81°42'29", in SE¼ sec.17, T.15 S., R.26 E., Marion County, Hydrologic Unit 03080101, 0.4 mi downstream from Juniper Springs, 9.0 mi upstream from Lake George, and 26.3 mi east of Ocala, FL.		1935-37 1946,1956 1961,1972 1981-88	5-04-89 9-22-89	12 12
02236147 Sweetwater Springs	Juniper Creek	Lat 29°13'07" long 81°39'36", in NE¼ of F. M. Arredondo Grant, T.15 S., R.26 E., Marion County, Hydrologic Unit 03080101, near left bank of Juniper Creek, 0.5 mi upstream from State Highway 19, and 7.2 mi northwest of Astor Park, FL.		1981-88	5-05-89 9-22-89	13 14
02236160 Silver Glen Springs	Lake George	Lat 29°14'40", long 81°38'34", in SE¼ sec.25, T.14 S., R.26 E., Marion County, Hydrologic Unit 03080101, 0.5 mi upstream from Lake George, and 9.1 mi northwest of Astor, FL.		1931-33 1935-36 1946,1956 1961,1972 1981-82 1984-88	5-05-89 9-25-89	94 99
02236205 Salt Springs	Lake George	Lat 29°21'00", long 81°43'40", in sec.42, Joseph M. Hernandez Grant, T.13 S., R.26 E., Marion County, Hydrologic Unit 03080101, 4.0 mi upstream from Lake George, and 10.9 mi east of Eureka, FL.		1929-33 1935-36 1946,1956 1961 1966-67 1972 1981-88	5-05-89 9-21-89	80 73

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‡ Operated as a periodic station

b Also known as "The Aquarium"

ANNUAL MAXIMUM FLOOD-PROFILE DATA

The following table contains the annual maximum stream elevation at selected gaging stations in the St. Johns River basin during the calendar year 1989.

These stations are equipped with a crest-stage gage which records the peak stage occurring between inspections of the gage.

Miles above mouth was measured along low-water channel on topographic maps.

The years given in the period of record represent calendar years.

Annual maximum flood-profile data during calendar year 1989

Station No.	Station name	Location	Miles above mouth	Drainage area (mi^2)	Period of record (calendar) years	Annual Maximum Date	Annual Maximum Elevation (ft)
		ST. JOHNS RIVER BASIN ABOVE OKLAWAHA RIVER					
02231460	St. Johns River crest-stage gage No. 1 near Micco, FL	Lat 27°54'42", long 80°46'13", in SW¼ sec.31, T.29 S., R.36 E., Brevard County, Hydrologic Unit 03080101 on right bank at cabbage palm tree, 10 ft west of centerline of dike, at Sotille Ranch, 400 ft north of 90° turn in dike, and 16.6 mi west of Micco. Datum of gage is National Geodetic Vertical Datum of 1929.	276	616	1954-89	1989	<21.37
02231470	St. Johns River crest-stage gage No. 2 near Malabar, FL	Lat 28°00'47", long 80°46'13", in NE¼ sec.36, T.28 S. R.35 E., Brevard County, Hydrologic Unit 03080101, on right bank at palm tree 250 ft west of dike, 12.5 mi west of Malabar. Datum of gage is National Geodetic Vertical Datum of 1929.	269	674	1953-89	1989	<18.21
02231800	St. Johns River crest-stage gage No. 3 near Melbourne, FL	Lat 28°03'27", long 80°46'51", in SW¼ sec.12, T.28 S., R.35 E., Brevard County, Hydrologic Unit 03080101, on right bank at palm tree west of Melbourne-Tillman Drainage District dike, 75 ft south of old road fill, 10.9 mi southwest of Melbourne. Datum of gage is National Geodetic Vertical Datum of 1929.	265	953	1953-89	1989	<19.46
02232160	St. Johns River crest-stage gage No. 5 near Deer Park, FL	Lat 28°12'35", long 80°51'25", in NE¼ sec.19, T.26 S., R.35 E., Brevard County, Hydrologic Unit 03080101, on left bank, on east side of dike at Deseret Farms of Florida, Inc., 8.6 mi north of Deer Park, Osceola County. Datum of gage is National Geodetic Vertical Datum of 1929.	248	1,100	1953-89	1989	<14.35
02232240	St. Johns River crest-stage gage No. 6A at Lake Winder, near Cocoa, FL	Lat 28°16'02", long 80°51'28", in NE¼ sec.31, T.25 S., R.35 E., Brevard County, Hydrologic Unit 03080101, at palm tree, on north side of drainage ditch near northwest shore of Lake Winder, 9.8 mi southwest of Cocoa. Datum of gage is National Geodetic Vertical Datum of 1929.	[d]246 244 [e]243	1,180	1961-89	1989	<15.60

[<] Actual value is known to be less than the value shown
[d] Inlet of lake
[e] Outlet of lake

Annual maximum flood-profile data during calendar year 1989--Continued

Station No.	Station name	Location	Miles above mouth	Drainage area (mi^2)	Period of record (calendar) years	Annual Maximum	
						Date	Elevation (ft)
		ST. JOHNS RIVER BASIN ABOVE OKLAWAHA RIVER--Continued					
02232260	St. Johns River crest-stage gage No. 7 near Cocoa, FL	Lat 28°17'20", long 80°49'12", in SW¼ sec.22, T.25 S., R.35 E., Brevard County, Hydrologic Unit 03080101, on left bank at palm tree between Lake Winder and Lake Poinsett, 7.2 mi southwest of Cocoa. Datum of gage is unknown.	241	1,209	1953-89	1989	14.85
02232430	St. Johns River crest-stage gage No. 8 near Christmas, FL	Lat 28°29'21", long 80°52'55", in NW¼ sec.13, T.23 S., R.34 E., Orange County, Hydrologic Unit 03080101, on left bank at cabbage palm tree, south of power line, at Tootoosahatchee Game Preserve 8.8 mi southeast of Christmas. Datum of gage is National Geodetic Vertical Datum of 1929.	217	1,385	1953-89	1989	<11.36
02232700	St. Johns River crest-stage gage No. 9 near Christmas, FL	Lat 28°36'36", long 80°57'54", in NE° sec.1, T.22 S., R.33 E., Brevard County, Hydrologic Unit 03080101, on right bank on west side of cabbage palm tree, 15 ft west of centerline of sand road on Kyzer Ranch, 6.0 mi northeast of Christmas. Datum of gage is National Geodetic Vertical Datum of 1929.	201	1,635	1953-89	1989	<8.19

< Actual value is known to be less than the value shown

ELEVATION AND WATER QUALITY OF LAKES

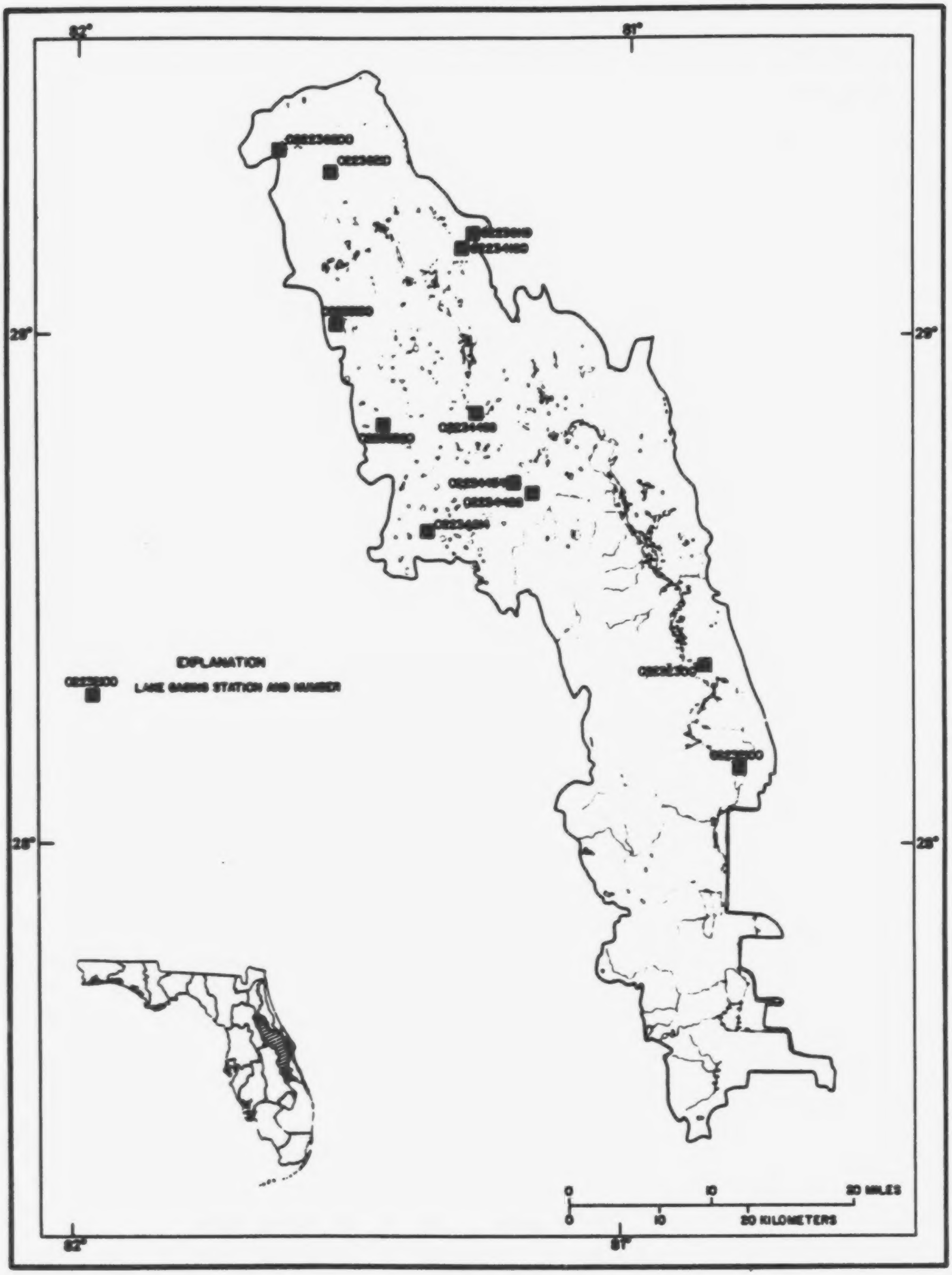

82°
81°
29°
29°
28°
28°
82°
81°
EXPLANATION
LAKE GAGING STATION AND NUMBER
0
10
20 MILES
0
10
20 KILOMETERS

Figure 24.--Location of lake gaging stations in the St. Johns River basin above the Oklawaha River.

ST. JOHNS RIVER

ST. JOHNS RIVER BASIN ABOVE OKLAWAHA RIVER

02232100 LAKE WASHINGTON NEAR EAU GALLIE, FL

LOCATION.--Lat 28°08'47", long 80°44'02", in SW¼ sec.9, T.27 S., R.36 E., Brevard County, Hydrologic Unit 03080101, on east shore of lake, 0.2 mi west of Melbourne Waterworks, and 6.5 mi west of Eau Gallie.

SURFACE AREA.--2,665 acres (4.16 mi^2).

DRAINAGE AREA.--1,025 mi^2.

PERIOD OF RECORD.--July 1942 to current year. Records of elevations prior to October 1960 are unpublished and available in files of the Orlando Subdistrict office.

REVISED RECORDS.--WRD FL 1966: Drainage area. WDR FL-81-1: Surface area.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929. Prior to May 30, 1975, at several sites within 1,100 ft northwest at following datums: July 24, 1942, to May 13, 1956, 12.39 ft higher; and May 14, 1956, to May 29, 1975, 10.39 ft higher. May 30, 1975 to June 19, 1989, 1,300 ft northwest of present site, at same datum.

REMARKS.--During November 1961, a semipermanent dam was built across the low-water channel of the St. Johns River about 0.5 mi downstream from the lake outlet. The crest of the dam was observed to be about 12.0 ft in 1961, about 13.4 ft in 1968, and about 9.5 ft in 1975. Washouts occurred at times and repairs to the dam were made by the addition of concrete bags. A steel piling dam at the lake outlet was completed on Feb. 1, 1976, with a permanent crest at 13.5 ft, and partially regulates lake elevation. Diversions are made from lake by City of Melbourne for municipal water supply.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily elevation, 20.39 ft, Oct. 1, 1960; minimum daily, 9.88 ft, May 28, 1975.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14.03	13.47	13.51	13.51	14.28	13.58	13.74	13.76	13.25	12.95	13.00	13.14
2	13.95	13.46	13.50	13.51	14.26	13.66	13.72	13.80	13.23	12.94	12.98	13.14
3	13.99	13.46	13.50	13.51	14.23	13.76	13.71	13.78	13.21	12.96	12.98	13.13
4	14.01	13.56	13.49	13.47	14.21	13.83	13.71	13.74	13.18	12.97	12.96	13.10
5	13.95	13.61	13.50	13.46	14.19	13.84	13.71	13.72	13.15	12.98	12.95	13.10
6	13.87	13.59	13.53	13.47	14.15	13.86	13.69	13.70	13.14	12.98	12.94	13.10
7	13.87	13.56	13.53	13.46	14.12	13.86	13.69	13.68	13.19	12.96	12.93	13.11
8	13.84	13.54	13.53	13.46	14.08	13.89	13.68	13.63	13.22	12.95	12.91	13.13
9	13.82	13.53	13.53	13.45	14.00	13.93	13.65	13.61	13.24	12.93	12.96	13.18
10	13.81	13.53	13.53	13.43	13.96	13.93	13.63	13.59	13.26	12.90	12.98	13.22
11	13.79	13.52	13.56	13.43	13.93	13.97	13.59	13.56	13.24	12.88	12.98	13.25
12	13.74	13.51	13.56	13.44	13.89	14.01	13.58	13.54	13.22	12.85	12.98	13.27
13	13.69	13.50	13.56	13.44	13.86	14.04	13.58	13.51	13.20	12.85	13.00	13.30
14	13.65	13.48	13.56	13.43	13.83	14.04	13.58	13.51	13.18	12.83	13.06	13.35
15	13.64	13.47	13.57	13.43	13.80	14.04	13.64	13.51	13.15	12.81	13.07	13.41
16	13.66	13.47	13.56	13.42	13.77	14.03	13.64	13.50	13.12	12.82	13.08	13.48
17	13.65	13.46	13.55	13.40	13.75	14.02	13.60	13.49	13.08	12.90	13.09	13.55
18	13.66	13.45	13.54	13.39	13.72	13.99	13.59	13.46	13.05	13.04	13.09	13.64
19	13.66	13.45	13.53	13.38	13.69	13.97	13.59	13.44	13.02	13.05	13.09	13.73
20	13.65	13.45	13.53	13.38	13.67	13.96	13.61	13.43	13.00	13.06	13.11	13.78
21	13.64	13.43	13.53	13.42	13.67	13.95	13.68	13.42	12.99	13.06	13.17	13.84
22	13.62	13.43	13.53	13.84	13.66	13.95	13.67	13.42	12.99	13.07	13.18	13.86
23	13.60	13.52	13.53	14.06	13.63	13.94	13.67	13.42	13.01	13.07	13.18	13.93
24	13.58	13.55	13.53	14.18	13.60	13.91	13.66	13.41	13.03	13.04	13.18	13.97
25	13.56	13.56	13.53	14.26	13.58	13.87	13.64	13.39	13.03	13.04	13.18	14.02
26	13.54	13.57	13.52	14.32	13.58	13.85	13.62	13.38	13.00	13.02	13.17	14.06
27	13.53	13.58	13.52	14.34	13.59	13.83	13.61	13.37	12.99	13.01	13.19	14.08
28	13.51	13.57	13.53	14.34	13.57	13.80	13.59	13.36	12.98	13.01	13.18	14.10
29	13.50	13.53	13.51	14.33	---	13.78	13.63	13.33	12.97	13.01	13.16	14.12
30	13.48	13.53	13.51	14.32	---	13.78	13.73	13.30	12.97	13.02	13.16	14.15
31	13.48	---	13.51	14.30	---	13.77	---	13.28	---	13.01	13.15	---
MEAN	13.71	13.51	13.53	13.70	13.87	13.89	13.65	13.52	13.11	12.97	13.07	13.54
MAX	14.03	13.61	13.57	14.34	14.28	14.04	13.74	13.80	13.26	13.07	13.19	14.15
MIN	13.48	13.43	13.49	13.38	13.57	13.58	13.58	13.28	12.97	12.81	12.91	13.10

CAL YR 1988 MEAN 14.21 MAX 15.86 MIN 13.43
WTR YR 1989 MEAN 13.50 MAX 14.34 MIN 12.81

ST. JOHNS RIVER

ST. JOHNS RIVER BASIN ABOVE OKLAWAHA RIVER

02232300 LAKE POINSETT NEAR COCOA, FL

LOCATION.--Lat 28°22'10", long 80°52'22", in SE¼ sec.25, T.24 S., R.34 E., Brevard County, Hydrologic Unit 03080101, near right bank of St. Johns River on downstream side of bridge on State Highway 520, 0.7 mi downstream from outlet of Lake Poinsett, and 8.8 mi west of Cocoa.

SURFACE AREA.--4,293 acres (6.71 mi^2).

DRAINAGE AREA.--1,272 mi^2.

PERIOD OF RECORD.--November 1941 to current year. Records of elevations prior to October 1960 are unpublished and available in files of the Orlando Subdistrict office. Since October 1963, records for St. Johns River near Cocoa (station 02232400).

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929. Prior to Feb. 23, 1943, nonrecording gage at datum 9.34 ft higher and Feb. 23, 1943, to Sept. 30, 1963, at datum 5.06 ft higher, at site on northeast side of lake at Poinsett Lodge..

REMARKS.--Lake is one of the St. Johns River chain of lakes.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily elevation, 17.55 ft, Oct. 11, 1953, at site then in use; minimum daily, 7.99 ft, June 18, 1945, at site then in use.

EXTREMES FOR CURRENT YEAR.--Maximum daily elevation, 12.60 ft, Oct. 3,4; minimum daily, 10.48 ft, Jan. 21.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12.55	11.83	11.37	10.92	12.11	11.57	11.62	11.30	10.95	10.73	10.92	11.67
2	12.52	11.80	11.31	10.89	12.13	11.57	11.66	11.26	10.91	10.74	10.88	11.70
3	12.60	11.80	11.29	10.83	12.13	11.64	11.64	11.28	10.87	10.74	10.88	11.70
4	12.60	11.86	11.29	10.79	12.12	11.68	11.64	11.30	10.85	10.72	10.88	11.66
5	12.58	11.85	11.25	10.81	12.13	11.70	11.60	11.29	10.81	10.70	10.87	11.62
6	12.52	11.84	11.26	10.80	12.13	11.70	11.54	11.24	10.77	---	10.84	11.65
7	12.48	11.82	11.27	10.79	12.10	11.64	11.50	11.17	10.74	---	10.82	11.65
8	12.48	11.80	11.25	10.77	12.07	11.61	11.51	11.19	10.76	---	10.81	11.63
9	12.50	11.77	11.23	10.73	11.97	11.57	11.51	11.21	10.81	---	10.82	11.66
10	12.49	11.72	11.21	10.68	11.96	11.59	11.48	11.14	10.79	---	10.89	11.70
11	12.48	11.71	11.21	10.67	11.97	11.73	11.39	11.10	10.76	---	11.06	11.71
12	12.44	11.67	11.21	10.68	11.96	11.80	11.35	11.09	10.74	---	11.11	11.73
13	12.39	11.65	11.16	10.63	11.99	11.84	11.36	11.11	10.72	---	11.27	11.73
14	12.38	11.60	11.22	10.64	11.99	11.87	11.37	11.09	10.70	---	11.38	11.78
15	12.35	11.59	11.22	10.60	11.96	11.89	11.37	11.08	10.69	---	11.44	11.78
16	12.33	11.59	11.21	10.56	11.93	11.88	11.38	11.06	10.68	---	11.46	11.79
17	12.31	11.55	11.13	10.52	11.90	11.87	11.38	11.04	10.62	---	11.48	11.79
18	12.30	11.53	11.13	10.50	11.82	11.86	11.33	11.02	10.57	---	11.48	11.88
19	12.29	11.52	11.14	10.50	11.80	11.82	11.32	10.99	10.54	---	11.50	11.95
20	12.27	11.48	11.15	10.49	11.82	11.85	11.32	10.95	10.53	---	11.59	11.98
21	12.23	11.41	11.12	10.48	11.81	11.83	11.30	10.95	10.51	11.08	11.58	11.95
22	12.19	11.45	11.10	10.93	11.77	11.83	11.30	11.08	10.51	11.09	11.60	12.04
23	12.16	11.48	11.10	11.32	11.62	11.83	11.31	11.07	10.52	11.09	11.61	12.07
24	12.13	11.47	11.08	11.63	11.59	11.77	11.30	11.08	10.54	11.08	11.63	12.14
25	12.08	11.51	11.06	11.81	11.63	11.74	11.28	11.09	10.56	11.04	11.63	12.20
26	12.06	11.56	11.03	11.92	11.62	11.74	11.24	11.10	10.54	11.00	11.66	12.27
27	12.05	11.53	11.04	11.97	11.62	11.77	11.22	11.09	10.52	10.99	11.69	12.32
28	12.00	11.46	11.01	12.02	11.57	11.76	11.19	11.05	10.50	10.98	11.69	12.35
29	11.96	11.42	10.98	12.06	---	11.73	11.21	11.04	10.58	10.95	11.68	12.38
30	11.91	11.42	10.96	12.07	---	11.70	11.27	11.03	10.71	10.96	11.67	12.39
31	11.90	---	10.95	12.10	---	11.66	---	10.99	---	10.95	11.69	---
MEAN	12.31	11.62	11.16	11.04	11.90	11.74	11.40	11.11	10.68	---	11.31	11.90
MAX	12.60	11.86	11.37	12.10	12.13	11.89	11.66	11.30	10.95	---	11.69	12.39
MIN	11.90	11.41	10.95	10.48	11.57	11.57	11.19	10.95	10.50	---	10.81	11.62

CAL YR 1988 MEAN 12.18 MAX 14.52 MIN 10.53

ST. JOHNS RIVER BASIN ABOVE OKLAWAHA RIVER

02234160 LAKE WINNEMISSETT NEAR DE LAND, FL

LOCATION.--Lat 29°01'10", long 81°15'06", in SW¼ sec.13, T.17 S., R.30 E., Volusia County, Hydrologic Unit 03080101, on southwest shore of lake, on private pier, 2.9 mi east of De Land.

SURFACE AREA.---169 acres (0.26 mi^2).

DRAINAGE AREA.--1.10 mi^2.

PERIOD OF RECORD.--March 1965 to current year.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.

REMARKS.--Lake is landlocked except possibly at high elevations.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily elevation, 61.01 ft, Feb. 23, 1984; minimum daily, 53.93 ft, Dec. 25, 1981.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	59.00	58.76	58.86	58.61	58.73	58.42	58.20	57.87	57.31	57.49	57.13	56.84
2	58.98	58.74	58.84	58.60	58.72	58.51	58.17	57.93	57.29	57.48	57.11	56.91
3	59.07	58.73	58.82	58.59	58.71	58.51	58.15	57.91	57.26	57.46	57.09	56.89
4	59.24	58.76	58.81	58.57	58.71	58.51	58.13	57.89	57.23	57.45	57.06	56.88
5	59.22	58.79	58.80	58.55	58.70	58.50	58.14	57.87	57.20	57.43	57.04	56.86
6	59.20	58.82	58.78	58.54	58.69	58.50	58.13	57.84	57.18	57.40	57.02	56.84
7	59.18	58.80	58.77	58.53	58.68	58.49	58.10	57.82	57.15	57.38	56.99	56.82
8	59.15	58.78	58.77	58.52	58.67	58.47	58.07	57.79	57.16	57.36	56.96	56.81
9	59.12	58.77	58.76	58.51	58.65	58.45	58.05	57.76	57.18	57.34	56.95	56.80
10	59.11	58.75	58.75	58.51	58.62	58.43	58.04	57.75	57.16	57.31	56.94	56.78
11	59.09	58.74	58.76	58.49	58.60	58.41	58.02	57.79	57.14	57.29	56.94	56.76
12	59.07	58.73	58.79	58.49	58.58	58.39	57.99	57.77	57.20	57.28	56.92	56.74
13	59.06	58.72	58.77	58.48	58.56	58.38	57.97	57.75	57.42	57.28	56.92	56.72
14	59.03	58.71	58.75	58.47	58.56	58.37	57.96	57.73	57.40	57.26	56.91	56.70
15	59.01	58.70	58.74	58.46	58.55	58.36	57.97	57.71	57.38	57.24	56.91	56.68
16	58.99	58.69	58.73	58.45	58.54	58.36	57.97	57.69	57.36	57.21	56.88	56.66
17	58.98	58.68	58.72	58.44	58.53	58.35	57.96	57.67	57.39	57.21	56.86	56.65
18	58.96	58.67	58.70	58.43	58.52	58.33	57.94	57.64	57.37	57.24	56.84	56.69
19	58.96	58.65	58.68	58.41	58.50	58.32	57.93	57.62	57.35	57.26	56.83	56.76
20	58.94	58.65	58.67	58.40	58.49	58.31	57.92	57.59	57.33	57.24	56.85	56.75
21	58.93	58.64	58.66	58.47	58.49	58.29	57.94	57.57	57.31	57.22	56.93	56.73
22	58.92	58.65	58.66	58.69	58.54	58.28	57.91	57.55	57.30	57.21	56.98	56.73
23	58.90	58.94	58.66	58.78	58.51	58.31	57.90	57.52	57.30	57.19	56.96	56.83
24	58.88	58.94	58.66	58.77	58.47	58.32	57.88	57.50	57.36	57.17	56.94	56.84
25	58.86	58.93	58.65	58.77	58.44	58.30	57.86	57.48	57.44	57.15	56.93	56.87
26	58.84	58.92	58.65	58.76	58.43	58.29	57.84	57.46	57.42	57.12	56.91	56.89
27	58.82	58.91	58.64	58.76	58.41	58.28	57.82	57.44	57.40	57.09	56.91	56.89
28	58.81	58.91	58.63	58.75	58.40	58.26	57.80	57.42	57.38	57.07	56.89	56.88
29	58.80	58.89	58.63	58.75	---	58.25	57.79	57.39	57.40	57.06	56.87	56.87
30	58.79	58.87	58.62	58.74	---	58.23	57.80	57.37	57.48	57.03	56.85	56.86
31	58.78	---	58.61	58.74	---	58.22	---	57.34	---	57.06	56.83	---
MEAN	58.99	58.77	58.72	58.58	58.57	58.37	57.98	57.66	57.31	57.26	56.94	56.80
MAX	59.24	58.94	58.86	58.78	58.73	58.51	58.20	57.93	57.48	57.49	57.13	56.91
MIN	58.78	58.64	58.61	58.40	58.40	58.22	57.79	57.34	57.14	57.03	56.83	56.65

CAL YR 1988 MEAN 59.43 MAX 60.40 MIN 58.61
WTR YR 1989 MEAN 57.99 MAX 59.24 MIN 56.65

ST. JOHNS RIVER BASIN ABOVE OKLAWAHA RIVER

02234428 LAKE CHARM AT OVIEDO, FL

LOCATION.--Lat 28°40'42", long 81°11'55", in NE¼ sec.10, T.21 S., R.31 E., Seminole County, Hydrologic Unit 03080101, near west shore, 0.8 mi northeast of intersection of State Highways 419 and 426 in Oviedo.

SURFACE AREA.--20.3 acres (0.03 mi^2).

DRAINAGE AREA.--0.11 mi^2.

PERIOD OF RECORD.--November 1975 to September 1979 (weekly), incomplete; May 1983 to current year (weekly), incomplete.

GAGE.--Nonrecording gage. Datum of gage is National Geodetic Vertical Datum of 1929 (Heath and Associates Land Surveyors bench mark). Prior to Apr. 30, 1976, at same site at datum 41.29 ft higher.

REMARKS.--Lake is landlocked.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation observed, 47.32 ft, Jan. 24, 1989; minimum observed, 40.24 ft, July 14, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum elevation observed, 47.32 ft, Jan. 24; minimum observed, 45.56 ft, Sept. 24.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
INSTANT VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	47.06	---	---	---	---	---	---	---	---
2	46.80	---	---	---	---	---	46.78	---	---	45.78	---	---
3	---	---	---	---	---	---	---	---	---	---	---	45.62
4	46.94	---	47.14	---	---	---	---	---	46.00	---	---	---
5	46.92	---	---	---	47.26	47.06	---	---	---	---	---	---
6	---	46.74	---	---	---	---	---	---	---	---	45.60	---
7	---	---	---	---	---	---	---	46.38	---	---	---	---
8	---	---	---	47.02	---	---	---	---	---	---	---	---
9	46.86	---	---	---	---	---	46.70	---	---	45.76	---	---
10	---	---	---	---	---	---	---	---	---	---	---	45.72
11	---	---	47.10	---	---	---	---	---	45.92	---	---	45.69
12	---	---	---	---	47.16	47.05	---	---	---	---	---	---
13	---	46.66	---	---	---	---	---	---	---	45.68	45.64	---
14	---	---	---	---	---	---	---	46.24	---	---	---	---
15	---	---	---	46.96	---	---	---	---	---	---	---	---
16	46.78	---	---	---	---	---	46.60	46.24	---	45.70	---	---
17	---	---	---	---	---	---	---	---	---	---	---	45.62
18	---	---	47.10	---	---	---	---	---	45.80	---	---	---
19	---	---	---	---	47.08	46.92	---	---	---	---	---	---
20	---	46.64	---	---	---	---	---	---	---	---	45.76	---
21	---	---	---	---	---	---	---	46.14	---	---	---	---
22	---	---	---	47.30	---	---	---	---	---	---	---	---
23	46.70	---	---	---	---	---	46.56	---	---	45.72	---	---
24	---	47.18	---	47.32	---	---	---	---	---	---	---	45.56
25	---	---	47.10	---	---	---	---	---	45.86	---	---	---
26	---	---	---	---	46.98	46.88	---	---	---	---	---	---
27	---	47.18	---	---	---	---	---	---	---	---	45.68	---
28	---	---	---	---	---	---	---	46.04	---	---	---	---
29	---	47.16	---	47.30	---	46.84	---	---	---	---	---	---
30	46.62	---	---	47.28	---	---	46.50	---	---	45.58	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---

ST. JOHNS RIVER

ST. JOHNS RIVER BASIN ABOVE OKLAWAHA RIVER

02234434 LAKE JESSUP NEAR SANFORD, FL

LOCATION.--Lat 28°42'04", long 81°14'17", in SE¼ sec.37, T.20 S., R.31 E., Seminole County, Hydrologic Unit 03080101, in boat canal on south shore, 5.4 mi east of the intersection of State Highway 434 and U.S. Highways 17 and 92, and 8 mi southeast of the courthouse in Sanford.

SURFACE AREA.--7,792 acres (12.2 mi^2).

DRAINAGE AREA.--156 mi^2.

PERIOD OF RECORD.--August 1941 to April 1943; September 1943 to July 1948; October 1977 to current year (weekly), incomplete.

REVISED RECORDS.--WDR FL-81-1: Surface area.

GAGE.--Nonrecording gage. Datum of gage is National Geodetic Vertical Datum of 1929 (Florida Department of Transportation bench mark). Prior to Apr. 30, 1943, nonrecording gage, and Sept. 1, 1943 to July 14, 1948, water-stage recorder at bridge 7.2 mi northeast at lake outlet at same datum (U.S. Army Corps of Engineers bench mark).

REMARKS.--Lake is one of St. Johns River chain of lakes. Elevation at gage subject to seiches caused by wind action and backwater at times from St. Johns River.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily elevation, 7.75 ft, Sept. 26, 1945, site and datum then in use; minimum daily, -0.63 ft, Apr. 6, 1945.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum elevation since at least 1871, 13.28 ft NGVD in fall of 1880 at Lake Monroe near Sanford (station 02234499), from information by Fred T. Williams, former Sanford City Engineer. Lake Monroe, about 5 mi downstream and the next lake in the St. Johns River chain of lakes, reached an elevation of 8.50 ft, Oct. 15-17, 1953. Lake Jessup would have been at these elevations and probably higher on these dates.

EXTREMES FOR CURRENT YEAR.--Maximum elevation observed, 2.86 ft, Sept. 23,30; minimum observed, 0.00 ft, June 17,19.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
INSTANT VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	1.83
3	---	---	2.68	---	---	---	---	---	.44	---	---	---
4	---	---	---	---	2.62	1.40	---	---	---	---	.70	---
5	---	1.82	---	---	---	---	---	---	---	---	.48	---
6	---	---	---	---	---	---	---	.54	---	---	---	---
7	---	---	---	1.16	---	---	---	---	---	---	---	---
8	2.58	---	---	---	---	---	.49	---	.37	.98	---	---
9	---	---	---	---	---	---	---	---	---	---	---	1.84
10	---	---	2.30	---	---	---	---	---	.38	---	---	---
11	---	---	---	---	2.06	1.48	---	---	---	---	---	---
12	---	1.18	---	---	---	---	---	---	---	---	.68	---
13	---	---	---	---	---	---	---	.52	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	2.62	---	---	1.14	---	---	1.10	---	---	.48	---	---
16	---	---	---	---	---	---	---	---	.20	---	---	2.56
17	---	---	2.06	---	1.64	---	---	---	.00	---	---	---
18	---	---	---	---	1.62	1.47	---	---	---	---	---	---
19	---	1.20	---	---	---	---	---	---	.00	---	1.46	---
20	---	---	---	---	---	---	.96	.54	---	---	---	---
21	---	---	2.07	2.65	---	---	---	---	---	---	---	---
22	2.28	---	---	---	---	---	1.00	---	.03	.68	---	---
23	---	---	---	---	---	---	---	---	---	---	---	2.86
24	---	---	1.88	---	---	---	---	---	.44	---	---	---
25	---	---	---	---	1.82	1.36	---	---	---	---	---	---
26	---	2.44	---	---	---	---	---	---	---	---	1.48	---
27	---	---	---	---	---	---	---	.62	---	---	---	2.06
28	---	---	---	2.62	---	---	---	---	---	---	---	---
29	2.32	---	---	---	---	---	.60	---	---	.78	---	---
30	---	---	---	---	---	---	---	---	1.45	---	---	2.86
31	1.89	---	1.68	---	---	.89	---	---	---	---	---	---

ST. JOHNS RIVER BASIN ABOVE OKLAWAHA RIVER

02234499 LAKE MONROE NEAR SANFORD, FL

LOCATION.--Lat 28°50'13", long 81°19'28", in SW¼ sec.16, T.19 S., R.30 E., Seminole County, Hydrologic Unit 03080101, on south bank of St. Johns River, at west side of bridge on U.S. Highways 17 and 92, at lake outlet, 4 mi northwest of Sanford.

SURFACE AREA.--8,840 acres (13.8 mi^2).

DRAINAGE AREA.--2,582 mi^2.

PERIOD OF RECORD.--July 1920 to January 1940 (weekly); July 1941 to current year. Since July 1941, records for St. Johns River near Sanford (station 02234500). Records of elevations prior to October 1960 are unpublished and available in files of the Orlando Subdistrict office.

REVISED RECORDS.--WDR FL-75-1: Drainage area, surface area.

GAGE.--Water-stage recorder. Datum of gage is 0.09 ft below National Geodetic Vertical Datum of 1929; gage readings have been reduced to elevations above NGVD. Prior to July 29, 1941, nonrecording gage on south shore of lake at Sanford at datum 0.09 ft higher.

REMARKS.--Lake is one of the St. Johns River chain of lakes. Elevation at gage subject to fluctuations caused by wind seiches and tide.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily elevation, 8.50 ft, Oct. 15-17, 1953; minimum daily, -0.52, Apr. 5, 1945.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum elevation since at least 1871, 13.28 ft in fall of 1880, from information by Fred T. Williams, former city engineer for Sanford.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.23	1.74	2.22	1.15	2.21	.95	.64	.60	.67	.68	.47	1.21
2	2.19	1.78	2.22	1.10	2.17	1.07	.64	.52	.63	.82	.46	1.26
3	2.24	1.79	2.20	1.02	2.10	1.13	.56	.56	.56	.92	.48	1.26
4	2.26	1.78	2.18	1.03	2.03	1.20	.51	.55	.47	.95	.54	1.23
5	2.23	1.70	2.13	1.04	1.97	1.23	.46	.49	.39	.97	.60	1.27
6	2.20	1.64	2.10	.98	1.90	1.20	.46	.45	.33	.96	.59	1.36
7	2.21	1.56	2.08	.93	1.83	1.14	.43	.45	.28	.95	.56	1.39
8	2.31	1.47	2.04	.88	1.78	1.16	.42	.54	.23	.86	.55	1.43
9	2.43	1.37	1.98	.83	1.73	1.33	.34	.52	.19	.74	.59	1.58
10	2.46	1.28	1.94	.81	1.70	1.55	.27	.47	.12	.63	.72	1.64
11	2.47	1.20	1.91	.92	1.68	1.72	.28	.47	.04	.53	.92	1.65
12	2.45	1.15	1.92	1.02	1.64	1.76	.47	.45	.01	.46	1.06	1.65
13	2.42	1.14	1.98	1.05	1.59	1.75	.69	.46	.01	.40	1.19	1.64
14	2.39	1.15	2.06	1.07	1.52	1.72	.86	.41	.01	.38	1.23	1.66
15	2.38	1.14	2.06	1.05	1.43	1.67	.93	.41	-.05	.33	1.28	1.64
16	2.35	1.13	2.02	1.01	1.33	1.59	.93	.43	-.12	.27	1.26	1.60
17	2.31	1.10	1.93	.96	1.23	1.49	.92	.44	-.15	.24	1.24	1.57
18	2.26	1.10	1.92	.92	1.19	1.40	.87	.46	-.18	.26	1.23	1.56
19	2.20	1.10	1.91	.89	1.29	1.31	.82	.46	-.13	.29	1.25	1.56
20	2.15	1.08	1.85	.83	1.39	1.25	.76	.46	-.11	.29	1.29	1.60
21	2.06	1.07	1.78	.88	1.39	1.18	.79	.50	-.04	.29	1.38	1.60
22	2.03	1.13	1.71	1.21	1.35	1.13	.90	.52	.08	.35	1.37	1.69
23	2.02	1.60	1.64	1.70	1.26	1.10	.95	.49	.16	.42	1.34	1.69
24	1.97	1.91	1.57	1.95	1.32	1.10	.92	.46	.24	.49	1.28	1.70
25	1.94	2.03	1.51	2.07	1.31	1.17	.85	.41	.29	.53	1.21	1.70
26	1.92	2.13	1.46	2.15	1.22	1.19	.76	.40	.31	.58	1.20	1.77
27	1.89	2.17	1.42	2.20	1.13	1.16	.68	.37	.35	.63	1.19	1.83
28	1.83	2.16	1.37	2.24	1.02	1.09	.60	.32	.37	.62	1.20	1.86
29	1.78	2.20	1.33	2.25	---	1.00	.56	.42	.43	.58	1.21	1.93
30	1.72	2.23	1.26	2.25	---	.87	.59	.58	.54	.54	1.21	1.99
31	1.71	---	1.21	2.24	---	.71	---	.66	---	.51	1.21	---
MEAN	2.16	1.53	1.84	1.31	1.56	1.27	.66	.48	.20	.56	1.01	1.58
MAX	2.47	2.23	2.22	2.25	2.21	1.76	.95	.66	.67	.97	1.38	1.99
MIN	1.71	1.07	1.21	.81	1.02	.71	.27	.32	-.18	.24	.46	1.21

CAL YR 1988 MEAN 1.68 MAX 2.88 MIN .30
WTR YR 1989 MEAN 1.18 MAX 2.47 MIN -.18

ST. JOHNS RIVER BASIN ABOVE OKLAWAHA RIVER

02234814 LAKE WEKIVA NEAR MAITLAND, FL

LOCATION.--Lat 28°36'09", long 81°25'38", in SW¼ sec.4, T.22 S., R.29 E., Orange County, Hydrologic Unit 03080101, near right bank on downstream side of bridge at Lake Wekiva outlet, 110 ft upstream from concrete control structure, 0.4 mi upstream from culvert on U.S. Highway 441, and 4.2 mi southwest of Maitland.

SURFACE AREA.--190 acres (0.30 mi^2).

DRAINAGE AREA.--13.4 mi^2.

PERIOD OF RECORD.--August 1969 to current year.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (Florida Department of Transportation bench mark). Prior to Dec. 10, 1975, at datum 81.93 ft higher.

REMARKS.--Lake level controlled by concrete control structure with removable boards. Since Aug. 11, 1972, undetermined amount of water diverted through drop culvert and underground pipe line to Horseshoe Lake, 2 mi west, for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily elevation, 87.04 ft, June 30, 1974; minimum daily, 82.09 ft, July 18, 1981.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	83.28	83.04	83.96	83.38	83.75	83.14	83.15	83.15	83.17	83.44	83.24	83.75
2	83.26	83.03	83.87	83.36	83.72	83.23	83.12	83.27	83.17	83.43	83.21	83.75
3	83.45	83.03	83.81	83.35	83.69	83.28	83.10	83.27	83.16	83.47	83.19	83.73
4	83.63	83.15	83.76	83.31	83.66	83.32	83.09	83.26	83.16	83.49	83.23	83.72
5	83.67	83.20	83.72	83.29	83.63	83.33	83.11	83.24	83.16	83.47	83.23	83.75
6	83.65	83.24	83.68	83.27	83.60	83.33	83.11	83.23	83.16	83.49	83.22	83.84
7	83.61	83.24	83.66	83.26	83.58	83.32	83.09	83.19	83.16	83.57	83.20	83.83
8	83.53	83.23	83.63	83.25	83.55	83.32	83.06	83.16	83.19	83.53	83.19	83.81
9	83.47	83.22	83.60	83.25	83.50	83.31	83.04	83.13	83.22	83.52	83.21	83.79
10	83.42	83.21	83.55	83.25	83.45	83.28	83.03	83.12	83.24	83.47	83.30	83.77
11	83.38	83.20	83.61	83.24	83.41	83.26	83.02	83.10	83.27	83.46	83.99	83.75
12	83.33	83.19	83.83	83.24	83.38	83.25	83.00	83.09	83.26	83.52	84.02	83.73
13	83.29	83.18	83.94	83.23	83.35	83.24	82.99	83.06	83.24	83.52	84.22	83.70
14	83.25	83.17	83.92	83.22	83.33	83.23	83.01	83.05	83.21	83.50	84.42	83.70
15	83.22	83.16	83.86	83.22	83.31	83.22	83.15	83.06	83.19	83.47	84.28	83.80
16	83.19	83.15	83.79	83.21	83.30	83.21	83.24	83.05	83.18	83.45	84.15	83.81
17	83.18	83.16	83.73	83.20	83.28	83.19	83.26	83.03	83.17	83.45	84.04	83.78
18	83.16	83.17	83.67	83.18	83.26	83.18	83.26	83.01	83.15	83.41	83.99	83.76
19	83.16	83.17	83.63	83.17	83.24	83.16	83.26	82.99	83.13	83.42	84.01	83.72
20	83.14	83.17	83.59	83.17	83.23	83.15	83.26	82.98	83.14	83.48	84.03	83.64
21	83.13	83.16	83.58	83.41	83.22	83.14	83.24	82.97	83.19	83.46	84.11	83.57
22	83.11	83.18	83.59	84.40	83.21	83.12	83.23	82.96	83.35	83.43	84.06	83.54
23	83.09	84.59	83.58	84.54	83.20	83.19	83.22	82.95	83.47	83.40	83.99	83.72
24	83.08	84.64	83.55	84.35	83.17	83.21	83.21	82.93	83.53	83.41	83.92	83.77
25	83.06	84.48	83.54	84.19	83.16	83.22	83.19	82.92	83.55	83.47	83.89	83.87
26	83.05	84.33	83.51	84.09	83.14	83.22	83.17	82.91	83.53	83.46	83.94	84.01
27	83.04	84.22	83.48	84.00	83.14	83.21	83.15	82.90	83.51	83.42	83.91	84.04
28	83.04	84.14	83.46	83.93	83.13	83.20	83.13	82.94	83.48	83.37	83.87	84.18
29	83.03	84.08	83.43	83.88	---	83.18	83.11	83.17	83.48	83.33	83.83	84.06
30	83.03	84.02	83.41	83.83	---	83.17	83.10	83.17	83.47	83.29	83.79	83.95
31	83.04	---	83.39	83.79	---	83.17	---	83.17	---	83.27	83.77	---
MEAN	83.26	83.47	83.66	83.53	83.38	83.23	83.14	83.08	83.28	83.45	83.76	83.79
MAX	83.67	84.64	83.96	84.54	83.75	83.33	83.26	83.27	83.55	83.57	84.42	84.18
MIN	83.03	83.03	83.39	83.17	83.13	83.12	82.99	82.90	83.13	83.27	83.19	83.54

CAL YR 1988 MEAN 83.64 MAX 84.64 MIN 83.03
WTR YR 1989 MEAN 83.42 MAX 84.64 MIN 82.90

ST. JOHNS RIVER BASIN ABOVE OKLAWAHA RIVER

02235150 LAKE DORR NEAR ALTOONA, FL

LOCATION.--Lat 29°00'10", long 81°38'05", in NE¼ sec.20, T.17 S., R.27 E., Lake County, Hydrologic Unit 03080101, on west shore of lake, 0.3 mi east of State Highway 19, and 2.6 mi north of Altoona.

SURFACE AREA.--1,712 acres (2.67 mi^2).

DRAINAGE AREA.--26.5 mi^2.

PERIOD OF RECORD.--August 1965 to current year (weekly), incomplete.

REVISED RECORDS.--WDR FL-75-1: Surface area. WDR FL-81-1: Drainage area.

GAGE.--Nonrecording gage. Datum of gage is 34.02 ft above National Geodetic Vertical Datum of 1929; gage readings have been reduced to elevations above NGVD.

REMARKS.--Outflow from lake is through Blackwater Swamp into Blackwater Creek.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation observed, 44.44 ft, Aug. 31, 1968; minimum observed, 41.52 ft, June 12, 1985.

EXTREMES FOR CURRENT YEAR.--Maximum elevation observed, 43.62 ft, Oct. 5; minimum observed, 42.62 ft, June 21.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
INSTANT VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	43.17	---	---	---	---	---	---
2	---	43.20	---	---	---	---	---	---	---	---	42.87	---
3	---	---	---	---	---	---	---	43.21	---	---	42.87	---
4	---	---	---	43.34	---	---	---	---	---	---	---	---
5	43.62	---	---	---	---	---	43.26	---	---	42.96	---	---
6	---	---	---	---	---	---	---	---	---	---	---	43.11
7	---	---	43.42	---	---	---	---	---	42.82	---	---	---
8	---	---	---	---	---	43.38	---	---	---	---	---	---
9	---	43.22	---	---	43.33	---	---	---	---	---	42.82	---
10	---	---	---	---	---	---	---	43.04	---	---	---	---
11	---	---	---	43.32	---	---	---	---	---	---	---	---
12	43.48	---	---	---	---	---	43.12	---	---	42.87	---	---
13	---	---	---	---	---	---	---	---	---	---	---	43.12
14	---	---	43.42	---	---	---	---	---	42.68	---	---	---
15	---	---	---	---	43.27	43.36	---	---	---	---	---	---
16	---	43.12	43.44	---	---	---	---	---	---	---	43.22	---
17	---	---	---	---	---	---	43.14	42.94	---	---	---	---
18	---	---	---	43.27	---	---	---	---	---	---	---	---
19	43.37	---	---	---	---	---	43.14	---	---	43.02	---	---
20	---	---	---	---	---	---	---	---	---	---	---	43.02
21	---	---	43.38	---	---	---	---	---	42.62	---	---	---
22	---	---	---	---	43.22	43.29	---	---	---	---	---	---
23	---	43.52	---	---	---	---	---	---	---	---	43.17	---
24	---	---	---	---	---	---	---	42.82	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	43.31	---	---	---	---	---	43.13	---	---	42.92	---	---
27	---	---	---	---	---	---	---	---	---	---	---	43.15
28	---	---	43.37	---	---	---	---	---	42.84	---	---	---
29	---	---	---	---	---	43.30	---	---	---	---	---	---
30	---	43.52	---	---	---	---	---	---	---	---	43.13	---
31	---	---	---	---	---	---	---	42.89	---	---	---	---

ST. JOHNS RIVER BASIN ABOVE OKLAWAHA RIVER

02235260 MOUNT PLYMOUTH LAKE AT MOUNT PLYMOUTH, FL

LOCATION.--Lat 28°48'39", long 81°31'23", in NW¼ sec.28, T.19 S., R.28 E., Lake County, Hydrologic Unit 03080101, on west shore of northeast bay of lake, 0.7 mi east of Mount Plymouth.

SURFACE AREA.--86 acres (0.13 mi^2).

DRAINAGE AREA.--1.30 mi^2.

PERIOD OF RECORD.--April 1983 to current year (weekly), incomplete.

GAGE.--Nonrecording gage. Datum of gage is 50.00 ft above National Geodetic Vertical Datum of 1929; gage readings have been reduced to elevations above NGVD.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation observed, 56.00 ft, Feb. 27, 1984; minimum observed, 51.29 ft, Sept. 28, 1989.

EXTREMES FOR CURRENT YEAR.--Maximum elevation observed, 53.45 ft, Jan. 25,30; minimum observed, 51.29 ft, Sept. 28.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
INSTANT VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	52.59	---	---	51.54	---
2	---	---	---	53.15	---	---	---	---	---	---	---	---
3	53.41	---	---	---	---	---	53.11	---	---	51.63	---	---
4	---	---	---	---	---	---	---	---	---	---	---	51.40
5	---	---	53.21	---	---	---	---	---	51.69	---	---	---
6	---	---	---	---	53.09	53.35	---	---	---	---	---	---
7	---	52.79	---	---	---	---	---	---	---	---	51.68	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	53.09	---	---	---	---	---	---	---	---
10	53.25	---	---	---	---	---	---	---	---	51.63	---	---
11	---	---	---	---	---	---	---	---	---	---	---	51.39
12	---	---	53.29	---	---	---	---	---	51.52	---	---	---
13	---	---	---	---	53.09	---	---	---	---	---	---	---
14	---	52.79	---	---	---	---	52.79	---	---	---	51.71	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	53.04	---	---	---	---	---	---	---	---
17	53.16	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	51.60	---	51.37
19	---	---	53.26	---	---	---	---	---	---	---	---	---
20	---	---	---	---	52.99	53.15	---	---	---	---	---	---
21	---	52.71	---	---	---	---	---	---	---	---	51.73	---
22	---	---	---	---	53.06	---	---	51.89	---	---	---	---
23	---	---	---	53.45	---	---	---	---	---	---	---	---
24	52.89	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	51.40
26	---	---	53.26	---	---	---	---	---	---	---	---	---
27	---	---	---	---	52.99	53.11	---	---	---	---	---	---
28	---	---	53.21	---	---	---	---	---	---	---	51.72	51.29
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	53.45	---	---	---	---	---	---	---	---
31	52.79	---	---	---	---	---	---	---	---	---	---	---

ST. JOHNS RIVER BASIN ABOVE OKLAWAHA RIVER

02236119 LAKE ODOM NEAR DE LEON SPRINGS, FL

LOCATION.--Lat 29°09'25", long 81°21'22", in NW¼ sec.36, T.15 S., R.29 E., Volusia County, Hydrologic Unit 03080101, on southwest shore of lake, 1.2 mi north of intersection of Lake Winona Road and State Highway 17, and 2.5 mi north of De Leon Springs.

SURFACE AREA.--66.0 acres (0.10 mi^2).

DRAINAGE AREA.--1.33 mi^2.

PERIOD OF RECORD.--November 1980 to September 1981, incomplete; October 1981 to current year (fragmentary).

GAGE.--Nonrecording gage. Datum of gage is National Geodetic Vertical Datum of 1929.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation observed, 30.47 ft, Mar. 23, 1983; minimum observed, 22.01 ft, June 26, 1981.

ELEVATION, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	ELEVATION ABOVE NGVD (FEET)	DATE	TIME	ELEVATION ABOVE NGVD (FEET)
OCT			APR		
26...	0940	26.59	14...	1410	26.29
DEC			JUN		
13...	1335	27.00	06...	1525	25.83
FEB			SEP		
15...	1510	26.69	28...	1040	26.90

ST. JOHNS RIVER BASIN BELOW OKLAWAHA RIVER

02236200 LAKE KERR NEAR EUREKA, FL

LOCATION.--Lat 29°20'10", long 81°46'00", in NE¼ sec.26, T.13 S., R.25 E., Marion County, Hydrologic Unit 03080101, on south shore of lake, 2.5 mi southwest of Salt Springs, and 9 mi southeast of Eureka.

SURFACE AREA.--4,484 acres (7.01 mi^2).

DRAINAGE AREA.--102 mi^2.

PERIOD OF RECORD.--April 1936 to April 1950 (monthly); July 1950 to June 1952, October 1955 to March 1960; April 1960 to September 1961 (weekly), incomplete; October 1961 to current year. Records of elevations prior to October 1960 are unpublished and available in files of the Jacksonville Field Headquarters.

REVISED RECORDS.--WDR FL-75-1: Surface area, drainage area.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (Florida Department of Transportation bench mark). Prior to July 1, 1950, nonrecording gage at site approximately 3 mi northwest on north shore of lake at datum 21.09 ft higher. July 1, 1950 to Dec. 1, 1955, nonrecording gage at present site at datum 21.50 ft higher and Dec. 2, 1955, to Oct. 10, 1961, at present datum.

REMARKS.--Lake is interconnected with Little Lake Kerr (formerly Lake Warner) during high-water periods.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily elevation, 27.00 ft, Oct. 11, 1966; minimum daily, 19.92 ft, May 10, 1957.

EXTREMES FOR CURRENT YEAR.--Maximum daily elevation, 22.98 ft, Nov. 23,24; minimum daily, 21.77 ft, June 17.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	22.80	22.94	22.88	22.86	22.67	22.58	22.37	21.91	22.18	22.19	22.32
2	---	22.79	22.92	22.88	22.86	22.74	22.55	22.37	21.89	22.18	22.21	22.35
3	---	22.77	22.90	22.87	22.86	22.76	22.54	22.34	21.86	22.18	22.29	22.33
4	---	22.78	22.90	22.86	22.85	22.78	22.53	22.32	21.85	22.19	22.28	22.33
5	---	22.81	22.90	22.84	22.84	22.81	22.58	22.30	21.87	22.20	22.26	22.36
6	---	22.82	22.90	22.83	22.84	22.80	22.57	22.28	21.88	22.28	22.24	22.38
7	---	22.81	22.89	22.83	22.83	22.80	22.54	22.25	21.90	22.34	22.22	22.38
8	---	22.80	22.89	22.82	22.83	22.80	22.51	22.22	21.90	22.32	22.19	22.40
9	---	22.79	22.90	22.82	22.81	22.77	22.49	22.19	21.89	22.30	22.20	22.38
10	---	22.78	22.90	22.82	22.78	22.76	22.48	22.18	21.87	22.28	22.25	22.38
11	---	22.78	22.92	22.82	22.76	22.74	22.48	22.23	21.86	22.26	22.32	22.36
12	---	22.77	22.95	22.81	22.75	22.74	22.46	22.20	21.85	22.25	22.32	22.35
13	---	22.77	22.94	22.81	22.74	22.73	22.44	22.18	21.84	22.23	22.37	22.33
14	---	22.76	22.93	22.81	22.73	22.72	22.43	22.16	21.83	22.20	22.41	22.31
15	---	22.76	22.92	22.80	22.73	22.72	22.45	22.15	21.81	22.22	22.48	22.30
16	---	22.75	22.93	22.80	22.72	22.71	22.47	22.13	21.78	22.24	22.46	22.29
17	22.94	22.74	22.93	22.79	22.72	22.71	22.46	22.12	21.77	22.24	22.45	22.32
18	22.94	22.74	22.91	22.78	22.71	22.70	22.45	22.10	21.78	22.24	22.44	22.40
19	22.93	22.73	22.90	22.77	22.70	22.70	22.44	22.07	21.78	22.25	22.43	22.38
20	22.92	22.73	22.89	22.76	22.69	22.68	22.45	22.06	21.89	22.25	22.43	22.36
21	22.92	22.72	22.89	22.79	22.70	22.67	22.51	22.05	22.02	22.25	22.43	22.34
22	22.90	22.76	22.89	22.87	22.75	22.66	22.49	22.07	22.08	22.29	22.43	22.34
23	22.88	22.98	22.89	22.91	22.73	22.67	22.47	22.04	22.13	22.29	22.42	22.39
24	22.86	22.98	22.89	22.90	22.69	22.69	22.46	22.02	22.18	22.31	22.40	22.43
25	22.86	22.97	22.89	22.90	22.67	22.68	22.44	22.00	22.17	22.32	22.39	22.48
26	22.84	22.97	22.89	22.89	22.66	22.67	22.43	21.99	22.16	22.30	22.38	22.48
27	22.84	22.97	22.88	22.89	22.65	22.66	22.41	21.98	22.14	22.28	22.36	22.48
28	22.83	22.97	22.88	22.88	22.64	22.65	22.39	21.96	22.13	22.27	22.34	22.48
29	22.83	22.95	22.88	22.88	---	22.63	22.37	21.98	22.12	22.25	22.32	22.47
30	22.82	22.95	22.88	22.87	---	22.62	22.36	21.95	22.15	22.23	22.30	22.45
31	22.81	---	22.88	22.87	---	22.61	---	21.93	---	22.21	22.29	---
MEAN	---	22.82	22.90	22.84	22.75	22.71	22.47	22.14	21.94	22.25	22.34	22.38
MAX	---	22.98	22.95	22.91	22.86	22.81	22.58	22.37	22.18	22.34	22.48	22.48
MIN	---	22.72	22.88	22.76	22.64	22.61	22.36	21.93	21.77	22.18	22.19	22.29

ST. JOHNS RIVER

ST. JOHNS RIVER BASIN BELOW OKLAWAHA RIVER

02236210 LAKE GEORGE NEAR SALT SPRINGS, FL

LOCATION.--Lat 29°17'41", long 81°39'05", in NW¼ sec.12, T.14 S., R.26 E., Marion County, Hydrologic Unit 03080101, on west shore of lake, on private pier, 6.5 mi southeast of Salt Springs.

SURFACE AREA.--46,780 acres (73.1 mi^2).

DRAINAGE AREA.--3,721 mi^2.

PERIOD OF RECORD.--May 1936 to April 1950 (monthly); August 1972 to current year (incomplete). Records of elevations prior to August 1972 are unpublished and available in files of the Jacksonville Field Headquarters.

REVISED RECORDS.--WDR FL-75-1: Surface area, drainage area.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929. May 1936 to April 1950, nonrecording gage on east side of lake at datum 2.91 ft lower. Aug. 1972, to Feb. 1981, at site 300 ft north at present datum.

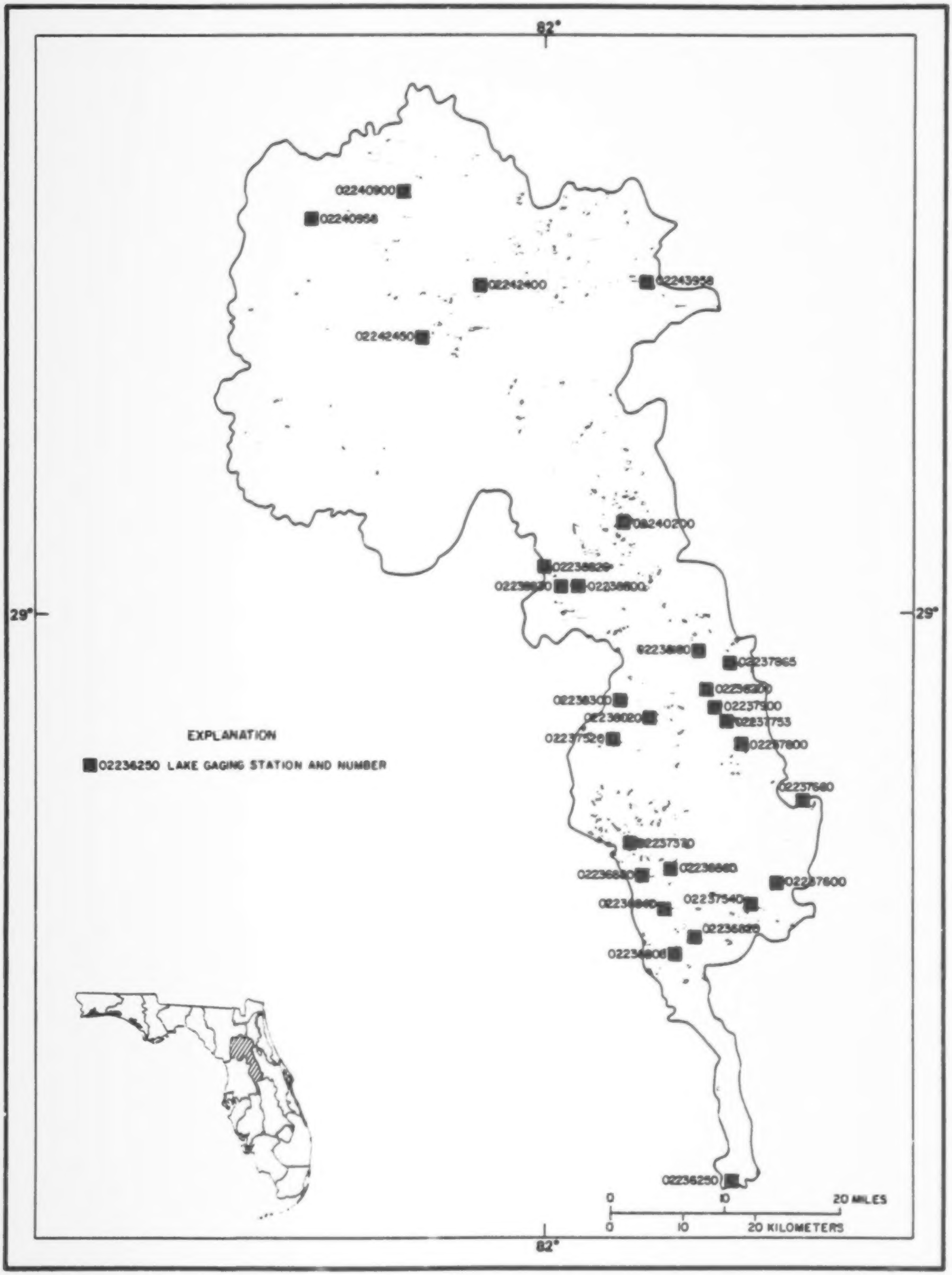
REMARKS.--Elevation at gage subject to fluctuations caused by wind action and tide.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation observed, 4.3 ft, occurred sometime during October 1948; minimum daily, -0.49 ft, Feb. 7, 1976.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.67	1.49	1.00	.59	.64	.11	.04	.25	.52	.56	.16	.84
2	1.61	1.46	.99	.56	.53	.39	.15	.18	.40	.76	.18	.90
3	1.51	1.34	.93	.53	.43	.63	.13	.23	.23	.81	.22	.86
4	1.48	1.23	.79	.51	.37	.75	.13	.28	.12	.78	.34	.86
5	1.54	1.12	.78	.53	.34	.75	.13	.26	.08	.72	.41	1.01
6	1.67	.98	.95	.50	.44	.66	.11	.23	.0	.70	.36	1.05
7	1.82	.80	.96	.44	.54	.60	.04	.22	-.09	.58	.25	1.11
8	1.97	.66	.92	.41	.60	.74	-.02	.28	-.13	.37	.26	1.22
9	2.05	.58	.89	.42	.71	1.04	-.11	.29	-.20	.16	.41	1.35
10	2.04	.56	.91	.50	.79	1.34	-.09	.19	-.30	.08	.65	1.38
11	1.97	.57	1.03	.69	.77	1.48	.09	.12	-.33	.05	.84	1.35
12	1.84	.61	1.26	.81	.68	1.47	.44	.14	-.27	.03	.87	1.31
13	1.77	.77	1.50	.82	.59	1.35	.69	.18	-.23	.03	.90	1.28
14	1.81	.82	1.47	.76	.50	1.20	.78	.18	-.24	-.01	.94	1.31
15	1.76	.79	1.35	.75	.38	1.05	.70	.17	-.31	-.10	.96	1.30
16	1.70	.77	1.20	.62	.29	.86	.62	.19	-.37	-.09	.90	1.21
17	1.60	.76	1.15	.52	.30	.73	.61	.22	-.38	-.07	.83	1.17
18	1.51	.78	1.13	.51	.67	.71	.55	.26	-.37	-.08	.79	1.16
19	1.41	.83	1.08	.47	.95	.66	.48	.27	-.33	-.06	.80	1.21
20	1.37	.85	.98	.42	1.06	.69	.42	.28	-.26	-.01	.89	1.30
21	1.46	.81	.89	.50	1.03	.68	.56	.30	-.16	.05	.88	1.27
22	1.49	.87	.81	.99	.98	.63	.71	.30	-.07	.16	.89	1.26
23	1.49	1.21	.78	1.48	.78	.74	.73	.23	-.02	.24	.78	1.13
24	1.46	1.40	.80	1.59	.63	.86	.61	.14	.05	.35	.61	1.09
25	1.44	1.47	.78	1.58	.52	.91	.48	.07	.09	.37	.51	1.33
26	1.42	1.44	.75	1.44	.47	.84	.37	.06	.12	.40	.56	1.43
27	1.37	1.31	.82	1.27	.37	.77	.24	.07	.19	.44	.68	1.44
28	1.32	1.14	.82	1.10	.17	.64	.18	.08	.19	.39	.79	1.61
29	1.26	1.02	.70	1.07	---	.48	.23	.34	.25	.27	.83	1.79
30	1.22	1.00	.61	.96	---	.25	.29	.58	.40	.21	.84	1.81
31	1.36	---	.60	.80	---	.04	---	.58	---	.19	.83	---
MEAN	1.59	.98	.96	.78	.59	.78	.34	.23	-.05	.27	.65	1.24
MAX	2.05	1.49	1.50	1.59	1.06	1.48	.78	.58	.52	.81	.96	1.81
MIN	1.22	.56	.60	.41	.17	.04	-.11	.06	-.38	-.10	.16	.84

CAL YR 1988 MEAN .84 MAX 2.05 MIN -.21
WTR YR 1989 MEAN .70 MAX 2.05 MIN -.38


82°
29°
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02240900
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02238829
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02237520
02237800
02237680
02237370
02236860
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02237600
02236840
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02236800
02236250
EXPLANATION
02236250 LAKE GAGING STATION AND NUMBER
0
10
20 MILES
0
10
20 KILOMETERS
82°

Figure 25.--Location of lake gaging stations in the Oklawaha River basin.

ST. JOHNS RIVER

OKLAWAHA RIVER BASIN

02236250 LAKE LOWERY NEAR HAINES CITY, FL

LOCATION.--Lat 28°06'51" long 81°40'17", in SW¼ sec.24, T.27 S., R.26 E., Polk County, Hydrologic Unit 03080102, at southeast end of stub canal on south side of lake, at Fletcher's Fish Camp, 2.5 mi northwest of Haines City.

SURFACE AREA.--897 acres (1.40 mi^2).

DRAINAGE AREA.--5.4 mi^2, approximately.

PERIOD OF RECORD.--June 1960 to September 1975 (once-daily); October 1975 to current year (weekly), incomplete. Records of elevations prior to October 1960 are unpublished and available in files of the Orlando Subdistrict office.

GAGE.--Nonrecording gage. Datum of gage is 122.86 ft above National Geodetic Vertical Datum of 1929; gage readings have been reduced to elevations NGVD. Prior to Aug. 28, 1974, at site 50 ft northeast at same datum.

REMARKS.--Lake is one of a group of lakes in the southern part of an extensive area of swampy flatlands and sandy ridges at relatively high elevation, called the Green Swamp. Streams that flow into five major drainage systems originate in or near the Green Swamp area.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation observed, 133.32 ft, Sept. 11, 1960, from floodmark; minimum observed, 125.12 ft, May 27, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum elevation observed, 128.24 ft, Jan. 27, Feb. 5; minimum observed, 126.66 ft, Aug. 20, Sept. 17.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
INSTANT VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	127.96	---	---	---	---	---	---	---	---
2	128.16	---	128.10	---	---	---	127.36	---	---	127.02	---	---
3	---	---	---	---	---	---	---	---	---	---	127.01	126.88
4	---	---	128.14	---	---	---	---	---	127.16	---	---	---
5	---	---	---	---	128.24	127.96	---	127.39	---	---	---	---
6	---	127.76	---	---	---	---	---	---	---	---	126.92	---
7	---	---	---	---	---	---	---	127.16	---	---	---	---
8	---	---	---	127.94	---	---	---	---	---	---	---	---
9	128.01	---	---	---	---	---	127.36	---	---	126.92	---	---
10	---	---	---	---	---	---	---	---	---	---	---	126.86
11	---	---	128.06	---	---	---	---	---	127.06	126.95	---	---
12	127.97	---	---	---	128.14	127.91	---	---	---	---	---	---
13	---	127.66	---	---	---	---	---	---	---	---	126.76	---
14	---	---	---	---	---	---	---	127.16	---	---	---	---
15	---	---	---	127.86	---	---	---	---	---	---	---	---
16	127.94	---	---	---	---	---	127.36	---	---	126.86	---	---
17	---	---	---	---	---	---	---	---	---	---	---	126.66
18	---	---	128.10	---	---	---	---	---	127.06	---	---	---
19	---	---	---	---	128.06	127.76	---	---	---	---	---	---
20	---	127.66	---	---	---	---	---	---	---	---	126.66	---
21	---	---	---	---	---	---	---	127.06	---	---	---	---
22	---	---	---	128.22	---	---	---	---	---	---	---	---
23	127.86	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	127.83	---	---	---	126.94	---	126.90
25	---	---	128.16	---	---	---	---	---	127.04	---	126.84	---
26	---	---	---	---	127.96	127.66	---	---	---	---	---	---
27	---	128.14	---	128.24	---	---	127.36	---	---	---	126.86	---
28	---	---	---	---	---	---	---	127.06	---	---	---	---
29	---	---	---	128.22	---	---	---	---	---	---	---	---
30	127.66	---	---	---	---	---	127.36	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	126.98	---	---

OKLAWAHA RIVER BASIN

02236808 LAKE NELLIE NEAR CLERMONT, FL

LOCATION.--Lat 28°27'53", long 81°45'57", in SW¼ sec.24, T.23 S., R.25 E., Lake County, Hydrologic Unit 03080102, on private pier on southeast shore of lake, 1.8 mi east of State Highway 561, and 5.6 mi south of Clermont.

SURFACE AREA.--704 acres (1.1 mi^2).

DRAINAGE AREA.--13.3 mi^2.

PERIOD OF RECORD.--July 1979 to September 1985 (weekly), incomplete; October 1985 to September 1989 (fragmentary), discontinued.

REVISED RECORDS.--WDR FL-81-1: 1979,1980.

GAGE.--Nonrecording gage. Datum of gage is 90.00 ft above National Geodetic Vertical Datum of 1929; gage readings have been reduced to elevations above NGVD. July 18, 1979, to Dec. 3, 1980, at site 0.4 mi north at datum 5.00 ft higher, and Dec. 3, 1980 to July 16, 1981, at present site at datum 5.00 ft higher.

REMARKS.--Lake is one of the Palatlakaha River headwaters chain of lakes. Lake is landlocked except above an elevation of about 98.5 ft, when there is flow through Lake Nellie Outlet into Lake Louisa. There is some pumpage from the lake for irrigation purposes.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation observed, 100.86 ft, Dec. 21, 1988; minimum observed, 95.72 ft, June 20, 1981.

ELEVATION, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	ELEVATION ABOVE NGVD (FEET)	DATE	TIME	ELEVATION ABOVE NGVD (FEET)
NOV 06...	1230	100.04	JUN 06...	1315	99.58
DFC 21...	1605	100.86	AUG 02...	1412	100.18
FEB 16...	1502	100.75	SEP 22...	1540	100.07
APR 11...	1430	100.18			

OKLAWAHA RIVER BASIN

02236820 LAKE LOUISA NEAR CLERMONT, FL

LOCATION.--Lat 28°29'49", long 81°44'02", in SW¼ sec.8, T.23 S., R.26 E., Lake County, Hydrologic Unit 03080102, on north shore of lake, 4.5 mi southeast of Clermont.

SURFACE AREA.--3,659 acres (5.72 mi^2).

DRAINAGE AREA.--121 mi^2.

PERIOD OF RECORD.--March 1957 to September 1975; October 1975 to current year (weekly). Records of elevations prior to October 1960 are unpublished and available in files of the Orlando Subdistrict office.

REVISED RECORDS.--WRD FL 1965: Surface area. WDR FL-72-3: Drainage area.

GAGE.--Nonrecording gage. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Gee and Jenson, Inc.). Prior to Aug. 30, 1974, at site 0.2 mi northwest at same datum.

REMARKS.--Lake is the most upstream of the Palatlakaha River headwaters chain of lakes. Since 1956, lake level partly controlled by earthen dam and concrete spillway with radial lift gates at outlet of Cherry Lake.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation observed, 99.64 ft, Mar. 25, 1960; minimum observed, 92.48 ft, Dec. 24, 1981.

EXTREMES FOR CURRENT YEAR.--Maximum elevation observed, 97.10 ft, Jan. 28; minimum observed, 95.80 ft, June 17.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
INSTANT VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	96.50	---	---	---	---	---	96.48	---	---	96.28	---	---
2	---	96.13	---	---	---	---	---	---	---	---	---	96.28
3	---	---	96.74	---	---	---	---	---	95.92	---	96.20	---
4	---	---	---	---	---	96.74	---	---	---	---	---	---
5	---	96.16	---	---	---	---	---	---	---	---	96.12	---
6	---	---	---	---	---	---	---	96.46	---	---	---	---
7	---	---	---	96.82	---	---	---	---	---	96.25	---	---
8	96.48	---	---	---	---	---	96.56	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	96.28
10	---	---	96.90	---	---	---	---	---	95.98	---	---	---
11	---	---	---	---	96.80	96.68	---	---	---	---	---	---
12	---	96.08	---	---	---	---	---	---	95.93	---	96.16	---
13	---	---	---	---	---	---	96.49	96.32	---	---	---	---
14	---	---	---	96.76	---	---	---	---	---	96.28	---	---
15	96.34	---	---	---	---	---	96.50	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	96.21
17	---	---	96.94	---	---	96.62	---	---	95.80	---	---	---
18	---	---	---	---	96.74	---	---	---	---	---	---	---
19	---	96.02	---	---	---	---	---	---	---	---	96.20	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	96.25	---	96.94	97.08	96.76	---	---	---	---	---	---	---
22	---	---	---	---	---	---	96.56	---	---	96.30	---	---
23	---	---	---	---	---	---	---	---	---	---	---	96.23
24	---	---	---	---	---	---	---	---	96.12	---	---	---
25	---	---	---	---	96.68	---	---	---	---	---	---	---
26	---	96.72	---	---	---	---	---	---	---	---	96.12	96.30
27	---	---	---	---	---	---	---	96.12	---	---	---	---
28	---	---	---	97.10	---	---	---	---	---	---	---	---
29	96.18	---	---	---	---	---	96.48	---	---	96.24	---	---
30	---	---	---	---	---	---	---	---	---	---	---	96.24
31	---	---	---	---	---	---	---	---	---	---	---	---

OKLAWAHA RIVER BASIN

02236840 LAKE MINNEHAHA AT CLERMONT, FL

LOCATION.--Lat 28°32'38", long 81°47'05", in NW¼ sec.28, T.22 S., R.25 E., Lake County, Hydrologic Unit 03080102, on northwest side of lake in cypress cove, on southeast side of bridge on State Highway 561, at lake outlet, 1 mi southwest of Clermont.

SURFACE AREA.--2,410 acres (3.77 mi^2).

DRAINAGE AREA.--131 mi^2.

PERIOD OF RECORD.--May 1945 to current year. Records of elevations prior to October 1960 are unpublished and available in files of the Orlando Subdistrict office.

REVISED RECORDS.--WDR FL-72-3: Drainage area, surface area.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929. Prior to June 5, 1946, nonrecording gage, and June 5, 1946, to Dec. 8, 1969, water-stage recorder, at site 1.8 mi east on north shore of lake. Gage at datum 91.32 ft higher May 31, 1945 to Aug. 20, 1955.

REMARKS.--Lake is one of the Palatlakaha River headwaters chain of lakes. Since 1956, lake level partly controlled by earthen dam and concrete spillway with radial lift gates at outlet of Cherry Lake.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily elevation, 99.04 ft, Apr. 5, 1960; minimum daily, 92.49 ft, Dec. 20-25, 1981.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	96.55	96.17	96.69	96.91	96.95	96.69	96.54	96.54	96.03	96.28	96.25	96.27
2	96.53	96.15	96.69	96.91	96.94	96.73	96.52	96.56	96.00	96.30	96.25	96.29
3	96.57	96.14	96.70	96.90	96.93	96.74	96.50	96.54	95.97	96.33	96.23	96.35
4	96.59	96.20	96.71	96.89	96.91	96.75	96.52	96.53	95.94	96.36	96.22	96.33
5	96.58	96.19	96.72	96.87	96.90	96.76	96.66	96.51	95.94	96.35	96.20	96.32
6	96.55	96.20	96.73	96.86	96.90	96.75	96.64	96.48	95.92	96.34	96.18	96.34
7	96.52	96.18	96.74	96.85	96.90	96.74	96.62	96.45	95.93	96.34	96.16	96.37
8	96.49	96.17	96.75	96.85	96.90	96.74	96.60	96.43	95.97	96.32	96.14	96.35
9	96.47	96.16	96.76	96.84	96.88	96.71	96.59	96.41	95.99	96.30	96.13	96.34
10	96.46	96.14	96.77	96.84	96.85	96.70	96.58	96.38	95.98	96.28	96.12	96.33
11	96.45	96.13	96.83	96.83	96.83	96.69	96.56	96.40	95.97	96.29	96.11	96.32
12	96.43	96.13	96.91	96.82	96.82	96.68	96.54	96.37	95.95	96.36	96.15	96.30
13	96.42	96.12	96.91	96.82	96.81	96.68	96.52	96.36	95.92	96.33	96.22	96.29
14	96.39	96.11	96.92	96.81	96.81	96.68	96.52	96.37	95.91	96.33	96.22	96.27
15	96.37	96.10	96.93	96.80	96.80	96.67	96.59	96.35	95.89	96.32	96.20	96.26
16	96.36	96.09	96.94	96.79	96.79	96.67	96.66	96.34	95.87	96.31	96.19	96.25
17	96.35	96.08	96.94	96.77	96.79	96.67	96.66	96.32	95.94	96.29	96.18	96.23
18	96.34	96.08	96.94	96.76	96.78	96.66	96.64	96.30	95.91	96.30	96.17	96.22
19	96.33	96.07	96.94	96.75	96.77	96.65	96.63	96.27	95.89	96.31	96.16	96.20
20	96.33	96.06	96.94	96.74	96.77	96.64	96.62	96.25	95.86	96.32	96.18	96.18
21	96.31	96.05	96.94	96.83	96.77	96.63	96.60	96.23	95.92	96.32	96.20	96.15
22	96.29	96.08	96.92	97.04	96.78	96.62	96.59	96.21	96.13	96.32	96.19	96.15
23	96.28	96.53	96.92	97.07	96.74	96.63	96.57	96.20	96.10	96.35	96.18	96.22
24	96.26	96.56	96.92	97.07	96.71	96.62	96.55	96.18	96.20	96.34	96.16	96.25
25	96.25	96.58	96.92	97.07	96.70	96.61	96.54	96.16	96.21	96.34	96.15	96.29
26	96.23	96.60	96.92	97.05	96.69	96.60	96.52	96.14	96.19	96.32	96.15	96.32
27	96.22	96.62	96.92	97.04	96.69	96.60	96.50	96.13	96.17	96.30	96.18	96.32
28	96.21	96.65	96.92	97.02	96.68	96.59	96.48	96.10	96.14	96.28	96.26	96.32
29	96.20	96.66	96.92	97.01	---	96.57	96.47	96.09	96.14	96.26	96.26	96.31
30	96.19	96.67	96.92	96.99	---	96.57	96.47	96.07	96.20	96.27	96.23	96.30
31	96.18	---	96.91	96.97	---	96.55	---	96.05	---	96.26	96.23	---
MEAN	96.38	96.26	96.86	96.90	96.81	96.66	96.57	96.31	96.01	96.31	96.19	96.28
MAX	96.59	96.67	96.94	97.07	96.95	96.76	96.66	96.56	96.21	96.36	96.26	96.37
MIN	96.18	96.05	96.69	96.74	96.68	96.55	96.47	96.05	95.86	96.26	96.11	96.15

CAL YR 1988 MEAN 96.48 MAX 97.20 MIN 96.05
WTR YR 1989 MEAN 96.46 MAX 97.07 MIN 95.86

ST. JOHNS RIVER

OKLAWAHA RIVER BASIN

02236860 LAKE APSHAWA NEAR MINNEOLA, FL

LOCATION.--Lat 28°36'13", long 81°46'36", in NE¼ sec.2, T.22 S., R.25 E., Lake County, Hydrologic Unit 03080102, on northwest shore of south portion of lake, 2.8 mi northwest of Minneola.

SURFACE AREA.--110 acres (0.17 mi^2).

DRAINAGE AREA.--1.48 mi^2.

PERIOD OF RECORD.--April 1953 to December 1984 (weekly) incomplete; January 1985 to current year (once-daily). Records of elevations prior to October 1960 are unpublished and available in files of the Orlando Subdistrict office.

REVISED RECORDS.--WDR FL-72-3: Surface area, drainage area.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929. Prior to Feb. 9, 1968, nonrecording gage at site 1,500 ft northwest at datum 86.16 ft higher. Feb. 9, 1968 to Jan. 19, 1985, nonrecording gage at site 800 ft east at present datum.

REMARKS.--Lake has no surface outlet. There is some pumpage from the lake for irrigation purposes.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation observed, 92.68 ft, Oct. 8,15, 1960; minimum observed, 82.10 ft, Nov. 17, 1977.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
INSTANT VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	85.69	85.37	85.60	85.52	85.63	85.40	85.19	85.10	84.50	84.55	84.92	84.92
2	85.68	85.36	85.59	85.51	85.63	85.43	85.17	85.10	84.46	84.61	84.91	84.98
3	85.69	85.34	85.58	85.51	85.63	85.46	85.15	85.08	84.43	84.77	84.89	85.00
4	85.71	85.35	85.57	85.50	85.63	85.46	85.16	85.06	84.41	84.90	84.87	84.99
5	85.69	85.37	85.56	85.48	85.62	85.46	85.24	85.04	84.41	84.91	84.85	84.98
6	85.67	85.37	85.55	85.47	85.62	85.46	85.23	85.02	84.39	84.90	84.83	84.99
7	85.64	85.36	85.55	85.46	85.61	85.44	85.20	84.99	84.38	84.89	84.80	85.06
8	85.62	85.35	85.54	85.46	85.60	85.42	85.18	84.96	84.43	84.87	84.78	85.06
9	85.60	85.34	85.53	85.46	85.57	85.39	85.17	84.93	84.45	84.86	84.76	85.05
10	85.59	85.33	85.53	85.46	85.55	85.37	85.16	84.91	84.44	84.84	84.75	85.04
11	85.59	85.33	85.55	85.45	85.54	85.36	85.13	84.91	84.43	84.83	84.73	85.03
12	85.58	85.32	85.61	85.43	85.52	85.35	85.11	84.89	84.41	84.87	84.72	85.01
13	85.56	85.31	85.61	85.43	85.51	85.34	85.09	84.88	84.39	84.87	84.75	84.99
14	85.54	85.31	85.60	85.43	85.50	85.34	85.08	84.88	84.36	84.90	84.76	84.98
15	85.52	85.30	85.59	85.42	85.50	85.33	85.15	84.87	84.34	84.88	84.75	84.97
16	85.51	85.29	85.59	85.41	85.49	85.33	85.27	84.85	84.32	84.82	84.73	84.95
17	85.50	85.28	85.58	85.41	85.49	85.32	85.28	84.84	84.39	84.88	84.71	84.93
18	85.50	85.28	85.56	85.40	85.47	85.32	85.27	84.81	84.38	84.92	84.69	84.91
19	85.49	85.27	85.55	85.38	85.47	85.31	85.26	84.79	84.36	84.97	84.68	84.89
20	85.49	85.26	85.54	85.38	85.46	85.29	85.25	84.77	84.34	85.04	84.69	84.87
21	85.48	85.26	85.53	85.46	85.46	85.29	85.23	84.75	84.38	85.04	84.69	84.85
22	85.47	85.30	85.53	85.64	85.50	85.27	85.21	84.73	84.50	85.03	84.68	84.85
23	85.46	85.50	85.53	85.66	85.48	85.27	85.19	84.71	84.51	85.05	84.66	84.91
24	85.45	85.63	85.53	85.65	85.45	85.28	85.18	84.69	84.56	85.04	84.65	84.95
25	85.44	85.63	85.53	85.65	85.43	85.27	85.17	84.67	84.58	85.03	84.64	85.00
26	85.43	85.63	85.53	85.65	85.42	85.26	85.15	84.66	84.57	85.02	84.65	85.03
27	85.41	85.63	85.53	85.65	85.41	85.25	85.13	84.64	84.55	84.99	84.67	85.02
28	85.40	85.63	85.52	85.64	85.39	85.23	85.11	84.62	84.53	84.98	84.80	85.01
29	85.40	85.63	85.52	85.64	---	85.22	85.09	84.59	84.52	84.96	84.91	85.00
30	85.39	85.61	85.52	85.64	---	85.21	85.08	84.56	84.54	84.94	84.90	84.99
31	85.38	---	85.52	85.64	---	85.21	---	84.53	---	84.94	84.89	---
MEAN	85.53	85.40	85.55	85.51	85.52	85.33	85.18	84.83	84.44	84.91	84.76	84.97
MAX	85.71	85.63	85.61	85.66	85.63	85.46	85.28	85.10	84.58	85.05	84.92	85.06
MIN	85.38	85.26	85.52	85.38	85.39	85.21	85.08	84.53	84.32	84.55	84.64	84.85

CAL YR 1988 MEAN 85.49 MAX 85.96 MIN 85.02
WTR YR 1989 MEAN 85.16 MAX 85.71 MIN 84.32

OKLAWAHA RIVER BASIN

02236880 CHERRY LAKE NEAR GROVELAND, FL

LOCATION.--Lat 28°35'33", long 81°49'21", in NE¼ sec.8, T.22 S., R.25 E., Lake County, Hydrologic Unit 03080102, on southwest shore of lake, 21 ft upstream from spillway at outlet, and 3 mi northeast of Groveland.

SURFACE AREA.--520 acres (0.81 mi^2).

DRAINAGE AREA.--165 mi^2.

PERIOD OF RECORD.--September 1956 to current year. Records for Palatlakaha River at Cherry Lake Outlet, near Groveland (station 02236900). Records of elevations prior to October 1960 are unpublished and available in files of the Orlando Subdistrict office.

REVISED RECORDS.--WDR FL-72-3: Drainage area, surface area.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (Gee and Jenson, Inc. bench mark).

REMARKS.--Lake is one of the Palatlakaha River headwaters chain of lakes. Since 1956, lake level controlled by earthen dam and concrete spillway with radial lift gates at outlet. An undetermined amount of water is diverted at times through a gated culvert in dam for irrigation.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily elevation, 98.13 ft, Apr. 22, 1959; minimum daily, 92.40 ft, Dec. 21-25, 1981.

EXTREMES FOR CURRENT YEAR.--Maximum daily elevation, 96.90 ft, Jan. 22; minimum daily, 95.77 ft, June 16,20.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	96.45	96.06	96.54	96.74	96.40	96.59	96.45	96.42	95.94	96.15	96.15	96.12
2	96.43	96.05	96.55	96.74	96.42	96.61	96.42	96.43	95.89	96.19	96.14	96.14
3	96.44	96.04	96.55	96.73	96.44	96.64	96.41	96.43	95.85	96.24	96.12	96.20
4	96.46	96.07	96.56	96.70	96.49	96.65	96.41	96.43	95.81	96.25	96.10	96.20
5	96.46	96.08	96.58	96.70	96.64	96.65	96.49	96.43	95.80	96.24	96.09	96.20
6	96.44	96.09	96.59	96.69	96.72	96.66	96.51	96.39	95.79	96.23	96.07	96.21
7	96.40	96.08	96.60	96.69	96.75	96.63	96.48	96.35	95.79	96.23	96.05	96.22
8	96.36	96.07	96.62	96.69	96.74	96.62	96.48	96.32	95.83	96.23	96.04	96.23
9	96.35	96.06	96.64	96.68	96.70	96.57	96.48	96.31	95.86	96.20	96.03	96.22
10	96.35	96.05	96.64	96.68	96.68	96.54	96.47	96.29	95.84	96.19	96.01	96.21
11	96.34	96.04	96.70	96.66	96.66	96.54	96.46	96.29	95.83	96.18	95.99	96.20
12	96.32	96.03	96.75	96.65	96.65	96.54	96.42	96.28	95.80	96.23	96.01	96.19
13	96.31	96.02	96.76	96.64	96.64	96.55	96.40	96.26	95.79	96.23	96.06	96.17
14	96.27	96.01	96.77	96.64	96.64	96.55	96.40	96.26	95.78	96.23	96.07	96.16
15	96.26	96.00	96.79	96.63	96.64	96.55	96.50	96.26	95.78	96.23	96.07	96.15
16	96.25	96.00	96.80	96.62	96.64	96.56	96.59	96.24	95.77	96.20	96.06	96.13
17	96.24	95.99	96.80	96.60	96.67	96.56	96.58	96.22	95.82	96.20	96.05	96.12
18	96.23	95.98	96.80	96.59	96.66	96.55	96.55	96.21	95.81	96.23	96.05	96.10
19	96.23	95.97	96.77	96.61	96.66	96.54	96.54	96.19	95.79	96.25	96.05	96.08
20	96.22	95.97	96.64	96.62	96.66	96.54	96.52	96.17	95.77	96.28	96.06	96.06
21	96.21	95.96	96.58	96.70	96.66	96.53	96.49	96.14	95.80	96.23	96.06	96.03
22	96.19	96.00	96.67	96.90	96.69	96.52	96.48	96.12	95.96	96.21	96.07	96.03
23	96.17	96.32	96.70	96.85	96.63	96.53	96.47	96.10	95.97	96.21	96.07	96.07
24	96.16	96.35	96.72	96.60	96.58	96.53	96.45	96.08	96.07	96.23	96.06	96.14
25	96.14	96.39	96.73	96.48	96.57	96.51	96.45	96.06	96.11	96.24	96.05	96.19
26	96.13	96.43	96.74	96.39	96.57	96.49	96.43	96.05	96.10	96.21	96.05	96.15
27	96.12	96.47	96.74	96.33	96.58	96.49	96.40	96.03	96.08	96.19	96.06	96.20
28	96.11	96.50	96.74	96.29	96.58	96.49	96.39	96.01	96.05	96.17	96.16	96.20
29	96.10	96.50	96.74	96.26	---	96.48	96.37	95.99	96.07	96.15	96.17	96.20
30	96.08	96.52	96.74	96.27	---	96.48	96.36	95.98	96.10	96.14	96.14	96.19
31	96.08	---	96.74	96.35	---	96.48	---	95.96	---	96.15	96.12	---
MEAN	96.27	96.14	96.69	96.60	96.62	96.55	96.46	96.22	95.89	96.21	96.07	96.16
MAX	96.46	96.52	96.80	96.90	96.75	96.66	96.59	96.43	96.11	96.28	96.17	96.23
MIN	96.08	95.96	96.54	96.26	96.40	96.48	96.36	95.96	95.77	96.14	95.99	96.03

WTR YR 1989 MEAN 96.32 MAX 96.90 MIN 95.77

ST. JOHNS RIVER

OKLAWAHA RIVER BASIN

02237370 CHURCH LAKE NEAR GROVELAND, FL

LOCATION.--Lat 28°38'40", long 81°50'47", in SE¼ sec.19, T.21 S., R.25 E., Lake County, Hydrologic Unit 03080102, on west shore of lake, 0.8 mi south of U.S. Highway 27, and 5.7 mi north of Groveland.

SURFACE AREA.--155 acres (0.24 mi^2).

DRAINAGE AREA.--1.66 mi^2.

PERIOD OF RECORD.--March 1970 to current year (weekly).

REVISED RECORD.--WDR FL-72-3: Drainage area, surface area.

GAGE.--Nonrecording gage. Datum of gage is National Geodetic Vertical Datum of 1929 (Florida Department of Transportation bench mark).

REMARKS.--There is some pumpage from lake for irrigation purposes.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation observed, 87.66 ft, Aug. 26, 1970; minimum observed, 80.72 ft, May 28, 1981.

EXTREMES FOR CURRENT YEAR.--Maximum elevation observed, 84.41 ft, Jan. 25; minimum observed, 82.91 ft, Oct. 19.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
INSTANT VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	83.93	---	---	---	---	---	---	---	---	---	---
2	---	83.99	---	---	---	---	---	---	82.94	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	84.19	---	---	---	---	---	---	---	---
5	84.03	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	84.27	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	84.05	---	---	---	---	---	---	83.39	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	84.03	---	---	---	---	---	---	---	83.44
12	83.61	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	83.79	---	---	---	---	---
14	---	---	84.31	---	---	---	---	---	---	---	---	---
15	---	---	---	---	84.26	---	---	---	---	---	---	---
16	---	84.13	---	---	---	---	---	83.37	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	83.95	---	---	---	---	---	---	---	---
19	82.91	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	83.22
22	---	84.25	84.21	---	---	---	---	---	---	---	---	---
23	---	84.21	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	84.41	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	83.33
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	84.29	84.19	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	83.58	---	---

ST. JOHNS RIVER

OKLAWAHA RIVER BASIN

02237520 LAKE HARRIS AT LEESBURG, FL

LOCATION.--Lat 28°48'14", long 81°52'24", in SE¼ sec.26, T.19 S., R.24 E., Lake County, Hydrologic Unit 03080102, on northwest shore of lake, at north side of concrete pier, 500 ft southeast of Leesburg Boat Club building in public park at Leesburg.

SURFACE AREA.--17,650 acres (27.6 mi^2), includes Little Lake Harris.

DRAINAGE AREA.--357 mi^2, includes Little Lake Harris.

PERIOD OF RECORD.--June 1936 to April 1950 (monthly); August 1956 to current year (once daily). Records of elevations prior to October 1960 are unpublished and available in files of the Orlando Subdistrict office.

REVISED RECORDS.--WDR FL-72-3: Drainage area, surface area.

GAGE.--Nonrecording gage. Datum of gage is National Geodetic Vertical Datum of 1929. Prior to Mar. 27, 1968, nonrecording gage at several sites within 700 ft northwest at following datums: June 1936, to April 1950, 61.09 ft higher; Aug. 9, 1956, to Aug. 21, 1961, 0.13 ft lower; Aug. 22, 1961, to Mar. 26, 1968, at present datum.

REMARKS.--Lake is one of the Oklawaha River headwaters chain of lakes. Since 1956, lake levels have been partially controlled by lock and dam structure with gated spillway on Haines Creek.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation observed, 64.81 ft, Apr. 22,24,26,27, 1960; minimum observed, 58.87 ft, Sept. 17,19-21,25-29, Oct. 3, 1956.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
INSTANT VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	63.08	62.68	62.90	62.92	63.06	63.10	63.10	63.02	62.82	62.74	62.72	62.80
2	63.06	62.66	62.90	62.92	63.08	63.10	63.08	63.02	62.82	62.72	62.70	62.80
3	63.04	62.66	62.90	62.92	63.10	63.10	63.08	63.00	62.84	62.74	62.70	62.80
4	63.02	62.64	62.90	62.92	63.10	63.10	63.08	63.00	62.84	62.74	62.70	62.80
5	63.00	62.64	62.90	62.90	63.12	63.12	63.08	63.00	62.86	62.76	62.70	62.78
6	62.98	62.64	62.90	62.90	63.12	63.12	63.06	63.00	62.86	62.76	62.72	62.78
7	62.96	62.66	62.90	62.90	63.14	63.14	63.06	62.98	62.88	62.78	62.72	62.78
8	62.94	62.66	62.90	62.90	63.14	63.16	63.06	62.96	62.88	62.78	62.72	62.80
9	62.92	62.66	62.90	62.90	63.16	63.16	63.06	62.96	62.90	62.76	62.72	62.80
10	62.90	62.68	62.90	62.90	63.16	63.16	63.04	62.94	62.90	62.76	62.74	62.80
11	62.88	62.68	62.90	62.90	63.18	63.18	63.04	62.94	62.88	62.74	62.74	62.80
12	62.86	62.68	62.90	62.90	63.18	63.18	63.04	62.92	62.88	62.74	62.74	62.80
13	62.84	62.70	62.90	62.90	63.20	63.18	63.04	62.88	62.86	62.72	62.74	62.80
14	62.82	62.70	62.90	62.90	63.20	63.20	63.04	62.88	62.86	62.70	62.76	62.80
15	62.80	62.70	62.90	62.90	63.20	63.20	63.02	62.88	62.86	62.68	62.76	62.80
16	62.80	62.68	62.90	62.90	63.18	63.20	63.02	62.86	62.84	62.66	62.76	62.80
17	62.80	62.68	62.90	62.90	63.20	63.20	63.04	62.86	62.84	62.66	62.76	62.80
18	62.80	62.68	62.90	62.90	63.20	63.20	63.04	62.84	62.84	62.66	62.78	62.80
19	62.78	62.68	62.90	62.90	63.20	63.18	63.06	62.84	62.82	62.68	62.78	62.80
20	62.78	62.70	62.90	62.90	63.18	63.18	63.06	62.82	62.82	62.68	62.80	62.80
21	62.78	62.74	62.90	62.90	63.18	63.18	63.08	62.82	62.82	62.70	62.82	62.80
22	62.78	62.78	62.90	62.92	63.16	63.16	63.08	62.80	62.82	62.70	62.82	62.80
23	62.76	62.90	62.90	62.92	63.16	63.16	63.10	62.80	62.82	62.70	62.80	62.80
24	62.76	63.10	62.90	62.94	63.14	63.16	63.08	62.78	62.82	62.70	62.80	62.82
25	62.74	63.10	62.90	62.94	63.14	63.16	63.08	62.78	62.80	62.70	62.78	62.82
26	62.74	63.10	62.90	62.96	63.12	63.14	63.06	62.76	62.78	62.70	62.78	62.84
27	62.72	63.04	62.92	62.96	63.12	63.14	63.06	62.76	62.78	62.70	62.76	62.84
28	62.72	62.90	62.92	62.98	63.10	63.14	63.04	62.78	62.76	62.70	62.76	62.86
29	62.70	62.90	62.92	62.98	---	63.12	63.04	62.78	62.76	62.72	62.76	62.86
30	62.70	62.90	62.92	63.00	---	63.12	63.02	62.80	62.74	62.72	62.78	62.88
31	62.68	---	62.92	63.04	---	63.12	---	62.80	---	62.72	62.78	---
MAX	63.08	63.10	62.92	63.04	63.20	63.20	63.10	63.02	62.90	62.78	62.82	62.88
MIN	62.68	62.64	62.90	62.90	63.06	63.10	63.02	62.76	62.74	62.66	62.70	62.78

CAL YR 1988 MAX 63.32 MIN 62.34
WTR YR 1989 MAX 63.20 MIN 62.64

ST. JOHNS RIVER

OKLAWAHA RIVER BASIN

02237540 JOHNS LAKE AT OAKLAND, FL

LOCATION.--Lat 28°32'28", long 81°38'32", in SE¼ sec.30, T.22 S., R.27 E., Orange County, Hydrologic Unit 03080102, on north shore of lake, 0.4 mi south of State Highway 50, and 1.0 mi southwest of Oakland.

SURFACE AREA.--2,411 acres (3.77 mi^2).

DRAINAGE AREA.--40.1 mi^2.

PERIOD OF RECORD.--September 1959 to current year (twice weekly), incomplete. Records of elevations prior to October 1960 are unpublished and available in files of the Orlando Subdistrict office.

GAGE.--Nonrecording gage. Datum of gage is 81.93 ft above National Geodetic Vertical Datum of 1929; gage readings have been reduced to elevations above NGVD. Prior to Oct. 15, 1980, at several sites within 0.8 mi at datum 6.15 ft higher. Oct. 15, 1980 to May 20, 1981, at present site at datum 4.00 ft higher.

REMARKS.--Lake level partially controlled by culvert with lift gate on outlet canal to Lake Apopka. Outlet canal opened Sept. 30, 1959 and control installed in June or July 1960; culvert invert at about elevation 95.4 ft.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation observed, 99.32 ft, Apr. 6, 1960; minimum observed, 85.57 ft, July 14, 1981.

EXTREMES FOR CURRENT YEAR.--Maximum elevation observed, 94.09 ft, Jan. 28; minimum observed, 92.19 ft, Sept. 16.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
INSTANT VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	92.83	---	---	---	---	---	---	---	---	92.45	---
2	---	92.84	---	---	---	---	---	93.05	92.42	---	---	92.29
3	---	---	92.61	93.63	---	---	---	---	92.37	---	92.48	---
4	93.33	---	---	---	94.03	93.73	93.33	---	---	92.73	---	---
5	---	92.92	---	---	---	---	---	---	---	---	92.39	92.33
6	---	---	92.61	---	---	---	---	92.97	92.29	---	---	---
7	---	---	---	93.59	93.93	93.69	---	---	---	---	---	---
8	93.25	92.87	---	---	---	---	93.29	---	---	92.77	92.39	---
9	---	---	---	---	---	---	---	92.85	---	---	---	92.31
10	---	---	92.63	93.55	---	---	---	---	92.31	---	---	---
11	93.11	---	---	---	93.91	93.63	93.25	---	---	92.71	---	---
12	---	92.81	---	---	---	---	---	---	---	---	92.39	92.23
13	---	---	93.65	---	---	---	---	92.81	92.25	---	---	---
14	---	---	---	93.53	93.91	93.61	---	---	---	---	---	---
15	93.11	92.77	---	---	---	---	93.25	---	---	92.65	92.35	---
16	---	---	---	---	---	---	---	92.75	---	---	---	92.19
17	---	---	93.73	93.53	93.86	---	---	---	92.21	---	---	---
18	93.05	---	---	---	93.83	93.53	93.19	---	---	92.65	---	---
19	---	92.73	---	---	---	---	---	---	---	---	92.38	92.25
20	---	---	93.73	---	---	---	---	92.73	92.27	---	---	---
21	---	---	93.73	93.89	93.81	---	---	---	---	---	---	---
22	93.03	92.77	---	---	---	93.49	93.11	---	---	92.63	92.33	---
23	---	---	---	---	---	---	---	92.61	---	---	---	92.33
24	---	---	93.75	93.93	---	---	---	---	92.55	---	---	---
25	92.95	---	---	---	93.71	93.45	93.09	---	---	92.59	---	---
26	---	92.79	93.71	---	---	---	---	---	---	---	92.29	92.35
27	---	---	---	---	---	---	---	92.49	92.65	---	---	---
28	---	---	---	94.09	93.81	93.33	---	---	---	---	---	---
29	92.91	92.63	---	---	---	---	93.01	92.51	---	92.58	92.35	---
30	---	---	---	---	---	---	---	---	92.71	---	---	92.38
31	---	---	93.69	94.05	---	93.27	---	---	---	---	---	---

ST. JOHNS RIVER

OKLAWAHA RIVER BASIN

02237600 LAKE APOPKA AT WINTER GARDEN, FL

LOCATION.--Lat 28°34'36", long 81°35'13", in NW¼ sec.14, T.22 S., R.27 E., Orange County, Hydrologic Unit 03080102, in southeast corner of west boat basin in public park at Winter Garden.

SURFACE AREA.--30,630 acres (47.9 mi^2).

DRAINAGE AREA.--128 mi^2.

PERIOD OF RECORD.--December 1935 to August 1942 (monthly); September 1942 to current year. Records of elevations prior to October 1960 are unpublished and available in files of the Orlando Subdistrict office.

REVISED RECORDS.--WRD FL 1965: Surface area, drainage area.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929. Prior to Sept. 18, 1942, nonrecording gage near present site on public pier at datum 66.25 ft higher. Sept. 18, 1942, to June 26, 1956, water-stage recorder at present site at datum 62.57 ft higher.

REMARKS.--Lake level partly regulated by lock and dam structure on Apopka-Beauclair Canal, 2.5 mi east of Astatula. Gate sills are at elevation 63.0 ft and fixed sheet piling weir at elevation 69.0 ft.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily elevation, 69.3 ft, Oct. 12, 1936; minimum daily, 64.04 ft, Aug. 13, 1956.

EXTREMES FOR CURRENT YEAR.--Maximum daily elevation, 67.51 ft, Jan. 22; minimum daily, 66.32 ft, June 21.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	66.92	66.77	67.16	67.18	67.44	67.09	67.04	66.89	66.51	66.58	66.57	66.59
2	66.91	66.74	67.13	67.17	67.42	67.14	66.89	67.06	66.48	66.63	66.59	66.59
3	66.91	66.69	67.10	67.20	67.41	67.14	66.87	67.00	66.46	66.76	66.58	66.56
4	67.07	66.70	67.10	67.21	67.42	67.14	66.89	66.95	66.44	66.79	66.54	66.57
5	67.08	66.75	67.09	67.11	67.39	67.15	66.99	66.92	66.42	66.78	66.52	66.57
6	67.07	66.81	67.07	67.09	67.38	67.16	67.07	66.95	66.40	66.76	66.52	66.59
7	67.09	66.77	67.07	67.09	67.38	67.23	66.99	67.00	66.40	66.76	66.52	66.63
8	67.05	66.75	67.08	67.10	67.40	67.26	66.93	66.90	66.43	66.74	66.47	66.63
9	66.99	66.73	67.08	67.11	67.40	67.31	66.91	66.85	66.46	66.72	66.46	66.61
10	66.97	66.74	67.09	67.12	67.33	67.19	66.92	66.87	66.50	66.70	66.47	66.62
11	66.95	66.73	67.13	67.11	67.29	67.13	66.95	66.90	66.53	66.68	66.44	66.62
12	66.96	66.73	67.27	67.09	67.26	67.11	66.92	66.85	66.50	66.70	66.54	66.61
13	66.98	66.71	67.25	67.10	67.21	67.11	66.88	66.79	66.49	66.69	66.63	66.60
14	66.93	66.71	67.17	67.09	67.20	67.10	66.83	66.80	66.44	66.68	66.64	66.58
15	66.90	66.68	67.16	67.10	67.21	67.09	66.97	66.81	66.41	66.67	66.64	66.57
16	66.88	66.66	67.19	67.12	67.21	67.08	67.06	66.80	66.38	66.65	66.64	66.58
17	66.89	66.67	67.26	67.10	67.22	67.08	67.04	66.77	66.39	66.62	66.59	66.63
18	66.87	66.65	67.20	67.08	67.23	67.08	67.04	66.73	66.37	66.61	66.57	66.65
19	66.87	66.63	67.13	67.06	67.20	67.08	67.04	66.70	66.34	66.64	66.59	66.63
20	66.86	66.64	67.13	67.08	67.15	67.04	67.03	66.69	66.33	66.63	66.60	66.61
21	66.87	66.66	67.14	67.18	67.14	67.05	67.06	66.69	66.32	66.60	66.64	66.65
22	66.88	66.70	67.13	67.51	67.27	67.03	67.03	66.68	66.44	66.62	66.63	66.54
23	66.82	67.27	67.14	67.49	67.43	66.99	66.99	66.66	66.51	66.65	66.61	66.64
24	66.80	67.17	67.15	67.43	67.27	67.07	66.98	66.63	66.53	66.63	66.61	66.78
25	66.81	67.12	67.15	67.42	67.13	67.03	66.97	66.62	66.55	66.47	66.61	66.80
26	66.76	67.09	67.15	67.43	67.10	67.01	66.97	66.59	66.53	66.63	66.60	66.83
27	66.74	67.10	67.14	67.44	67.08	66.98	66.96	66.56	66.52	66.61	66.58	66.87
28	66.75	67.21	67.14	67.43	67.08	66.96	66.95	66.55	66.51	66.60	66.56	66.87
29	66.75	67.14	67.15	67.43	---	66.94	66.90	66.56	66.51	66.58	66.57	66.86
30	66.77	67.12	67.15	67.43	---	66.90	66.88	66.53	66.53	66.56	66.55	66.82
31	66.74	---	67.15	67.44	---	67.00	---	66.51	---	66.57	66.55	---
MEAN	66.90	66.83	67.14	67.22	67.27	67.09	66.96	66.77	66.45	66.66	66.57	66.66
MAX	67.09	67.27	67.27	67.51	67.44	67.31	67.07	67.06	66.55	66.79	66.64	66.87
MIN	66.74	66.63	67.07	67.06	67.08	66.90	66.83	66.51	66.32	66.47	66.44	66.54

WTR YR 1989 MEAN 66.88 MAX 67.51 MIN 66.32

ST. JOHNS RIVER

OKLAWAHA RIVER BASIN

02237660 LAKE FRANCIS NEAR PLYMOUTH, FL

LOCATION.--Lat 28°40'20", long 81°32'23", in NW¼ sec.32, T.20 S., R.28 E., Orange County, Hydrologic Unit 03080102, on north shore of lake at Errol Estate, 1.3 mi northeast of Plymouth.

SURFACE AREA.--33.0 acres (0.05 mi^2).

DRAINAGE AREA.--0.67 mi^2.

PERIOD OF RECORD.--September 1959 to July 1963 (twice weekly), incomplete; August 1963 to August 1964 (fragmentary); September 1964 to June 1967 (weekly), incomplete; July 1967 to current year (fragmentary). Records of elevations prior to October 1960 are unpublished and available in files of the Orlando Subdistrict office. Prior to January 1961, published as Lake Wenonah near Plymouth.

REVISED RECORDS.--WRD FL 1965: Surface area.

GAGE.--Nonrecording gage. Datum of gage is National Geodetic Vertical Datum of 1929. Prior to Oct. 8, 1971, at site 1,400 ft south at datum 54.40 ft higher and Oct. 8, 1971, to Feb. 23, 1982 at present site at datum 54.40 ft higher.

REMARKS.--Lake is landlocked. There is some pumpage from lake for irrigation purposes.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation observed, 66.22 ft, Oct. 15,17,24,29, 1960, present datum; minimum observed, 53.30 ft, June 24, 1981, present datum.

ELEVATION, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	ELEVATION ABOVE NGVD (FEET)	DATE	TIME	ELEVATION ABOVE NGVD (FEET)
OCT 31...	0810	58.91	JUN 08...	0920	55.37
DEC 28...	0935	58.24	AUG 01...	1259	56.01
FEB 22...	1422	57.39	SEP 25...	1010	55.82
APR 10...	1445	56.35			

ST. JOHNS RIVER

OKLAWAHA RIVER BASIN

02237753 WEST CROOKED LAKE NEAR EUSTIS, FL

LOCATION.--Lat 28°49'49", long 81°40'20", in SW¼ sec.13, T.19 S., R.26 E., Lake County, Hydrologic Unit 03080102, on east shore of southeast bay of lake, 1.7 mi southeast of Eustis.

SURFACE AREA.--107 acres (0.17 mi^2).

DRAINAGE AREA.--0.67 mi^2, includes East Crooked Lake.

PERIOD OF RECORD.--February 1970 to current year (weekly), incomplete.

REVISED RECORDS.--WDR FL-72-3: Drainage area, surface area.

GAGE.--Nonrecording gage. Datum of gage is National Geodetic Vertical Datum of 1929.

REMARKS.--Lake is interconnected with East Crooked Lake above an elevation of about 69 ft.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation observed, 71.48 ft, Apr. 11, 1970; minimum observed, 60.30 ft, Dec 4, 1981.

EXTREMES OUTSIDE PERIOD OF RECORD.--An elevation of 74.74 ft was reached in 1960 from information by local resident.

EXTREMES FOR CURRENT YEAR.--Maximum elevation observed, 63.86 ft, Oct. 6; minimum observed, 62.62 ft, June 17.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
INSTANT VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUC	SEP
1	---	---	---	---	---	---	---	---	---	---	62.89	---
2	---	---	---	63.68	---	---	63.40	63.38	---	---	---	63.08
3	---	---	---	---	---	---	---	---	---	63.15	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	63.72	---	---	---	62.78	---	---	62.92
6	63.86	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	63.30	---	63.18	---	---
8	---	---	---	---	---	---	---	---	---	---	62.96	---
9	---	---	---	63.70	---	---	---	---	---	---	---	---
10	---	---	63.72	---	---	---	63.38	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	63.75	---	---	---	63.68	---	---	---	---	---	---	---
13	---	---	---	---	63.62	---	---	---	---	---	---	---
14	---	63.50	---	---	---	---	---	---	62.68	---	---	---
15	63.70	---	---	---	---	---	---	---	---	63.00	---	---
16	---	63.48	---	---	---	---	---	---	---	---	63.00	---
17	---	---	---	---	---	---	---	---	62.62	---	---	---
18	---	---	---	---	63.56	63.68	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	63.49	63.70	---	---	---	---	---	---	62.98	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	63.85	---	---	---	---	63.30	---	---	---	---	---
24	---	---	---	---	---	63.56	---	---	62.85	---	---	---
25	---	---	---	63.76	---	---	---	---	---	62.98	---	62.90
26	---	---	63.70	---	63.52	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	63.80	---	---	---	---	---	---	---	---	---	62.98
29	---	---	---	---	---	---	63.18	62.88	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	63.55	---	---	---	---	---	---	---	---	---	---	---

02237800 LAKE DORA AT MOUNT DORA, FL

LOCATION.--Lat 28°47'46", long 81°38'39", in NE¼ sec.31, T.19 S., R.27 E., Lake County, Hydrologic Unit 03080102, on west shore of northeast bay of lake, at Mount Dora Marina at Mount Dora.

SURFACE AREA.--4,437 acres (6.93 mi^2).

DRAINAGE AREA.--236 mi^2.

PERIOD OF RECORD.--November 1935 to June 1942 (monthly); July 1942 to current year (once daily). Records of elevations prior to October 1960 are unpublished and available in files of the Orlando Subdistrict office.

REVISED RECORDS.--WDR FL-72-3: Drainage area, surface area.

GAGE.--Nonrecording gage. Datum of gage is National Geodetic Vertical Datum of 1929. See WDR FL-80-1 for history of changes prior to Sept. 28, 1973.

REMARKS.--Lake is one of the Oklawaha River headwaters chain of lakes. Since 1956, lake levels have been partially controlled by lock and dam structure with gated spillway on Haines Creek.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation observed, 65.20 ft, Apr. 5, 1960; minimum observed, 60.53 ft, Feb. 18,19, 1957.

EXTREMES OUTSIDE PERIOD OF RECORD.--An elevation of 65.7 ft was reached in September 1926, from information by two local residents.

EXTREMES FOR CURRENT YEAR.--Maximum elevation observed, 63.30 ft, Feb. 7,8; minimum observed, 62.46 ft, June 5,6,16.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
INSTANT VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	62.88	62.60	62.86	62.88	63.20	63.08	63.06	63.00	62.50	62.88	62.64	62.80
2	62.86	62.60	62.84	62.92	63.22	63.22	63.04	63.02	62.50	62.88	62.64	62.78
3	62.92	62.60	62.82	62.92	63.24	63.22	63.02	62.98	62.48	62.92	62.66	62.78
4	62.92	62.62	62.82	62.92	63.26	63.22	62.98	62.94	62.48	62.90	62.66	62.78
5	62.90	62.62	62.82	62.90	63.28	63.22	63.10	62.92	62.46	62.88	62.68	62.76
6	62.86	62.66	62.80	62.88	63.28	63.26	63.12	62.92	62.46	62.86	62.66	62.76
7	62.86	62.64	62.78	62.88	63.30	63.24	63.10	62.88	62.48	62.82	62.64	62.76
8	62.82	62.64	62.80	62.88	63.30	63.24	63.08	62.86	62.48	62.78	62.62	62.74
9	62.80	62.62	62.80	62.86	63.28	63.24	63.06	62.82	62.56	62.74	62.60	62.74
10	62.80	62.62	62.80	62.86	63.26	63.18	63.06	62.78	62.56	62.72	62.62	62.74
11	62.78	62.62	62.84	62.86	63.24	63.16	63.04	62.78	62.54	62.68	62.62	62.72
12	62.78	62.60	62.84	62.86	63.22	63.18	62.98	62.76	62.52	62.66	62.66	62.72
13	62.78	62.60	62.88	62.88	63.22	63.18	62.94	62.74	62.50	62.62	62.76	62.70
14	62.76	62.58	62.86	62.88	63.20	63.16	62.92	62.74	62.50	62.58	62.76	62.70
15	62.76	62.58	62.86	62.90	63.18	63.16	62.98	62.72	62.48	62.58	62.74	62.70
16	62.74	62.56	62.86	62.90	63.16	63.16	63.02	62.72	62.46	62.58	62.74	62.68
17	62.72	62.58	62.86	62.88	63.14	63.16	63.00	62.68	62.48	62.58	62.72	62.74
18	62.70	62.58	62.84	62.86	63.12	63.14	62.98	62.64	62.48	62.56	62.70	62.74
19	62.70	62.56	62.84	62.86	63.12	63.14	62.98	62.62	62.48	62.58	62.70	62.72
20	62.70	62.56	62.84	62.86	63.10	63.14	62.98	62.60	62.48	62.58	62.76	62.70
21	62.68	62.56	62.84	62.86	63.10	63.14	62.96	62.60	62.50	62.62	62.74	62.70
22	62.68	62.56	62.86	62.92	63.20	63.12	62.94	62.62	62.68	62.58	62.74	62.68
23	62.68	62.92	62.86	63.02	63.18	63.10	62.94	62.62	62.66	62.64	62.74	62.68
24	62.66	62.94	62.86	63.14	63.20	63.14	62.92	62.62	62.72	62.70	62.70	62.72
25	62.66	62.94	62.88	63.12	63.14	63.14	62.92	62.60	62.78	62.66	62.68	62.82
26	62.64	62.92	62.88	63.12	63.12	63.12	62.90	62.58	62.74	62.64	62.68	62.82
27	62.64	62.92	62.86	63.14	63.10	63.10	62.90	62.56	62.70	62.64	62.68	62.78
28	62.62	62.92	62.86	63.18	63.08	63.08	62.88	62.56	62.68	62.66	62.66	62.78
29	62.60	62.92	62.88	63.18	---	63.08	62.88	62.54	62.84	62.66	62.66	62.76
30	62.62	62.86	62.88	63.20	---	63.08	62.98	62.54	62.86	62.62	62.66	62.74
31	62.62	---	62.88	63.20	---	63.08	---	62.52	---	62.62	62.66	---
MEAN	62.75	62.68	62.84	62.96	63.19	63.16	62.99	62.73	62.57	62.69	62.68	62.74
MAX	62.92	62.94	62.88	63.20	63.30	63.26	63.12	63.02	62.86	62.92	62.76	62.82
MIN	62.60	62.56	62.78	62.86	63.08	63.08	62.88	62.52	62.46	62.56	62.60	62.68

WTR YR 1989 MEAN 62.83 MAX 63.30 MIN 62.46

ST. JOHNS RIVER

OKLAWAHA RIVER BASIN

02237865 LAKE UMATILLA AT UMATILLA, FL

LOCATION.--Lat 28°55'06", long 81°39'44", in SE¼ sec.13, T.18 S., R.26 E., Lake County, Hydrologic Unit 03080102, on south shore of lake, 0.8 mi south of Umatilla.

SURFACE AREA.--165 acres (0.26 mi^2).

DRAINAGE AREA.--2.46 mi^2.

PERIOD OF RECORD.--March 1970 to current year (weekly), incomplete.

REVISED RECORDS.--WDR FL-72-3: Drainage area, surface area.

GAGE.--Nonrecording gage. Datum of gage is National Geodetic Vertical Datum of 1929. Prior to Feb. 4, 1983, at site 1,200 ft west at present datum.

REMARKS.--Lake is landlocked except above an elevation of about 70 ft, when there is overflow to the south into a swamp known as Eustis Meadows, thence through a canal into Lake Eustis.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation observed, 68.66 ft, Mar. 13, 1970; minimum observed, 64.20 ft, Dec. 18, 1981.

EXTREMES FOR CURRENT YEAR.--Maximum elevation observed, 67.94 ft, Nov. 23,25, Dec. 18; minimum observed, 66.77 ft, Sept. 25.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
INSTANT VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	67.90	---	---	---	---	---	67.62	---	---	67.15	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	67.14	---	---	---
4	---	---	67.87	---	67.85	---	---	---	---	---	66.94	66.88
5	---	67.62	---	---	---	67.88	---	---	67.09	---	66.90	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	67.58	---	---	---	---
8	67.87	---	---	---	---	---	67.64	---	---	67.20	---	---
9	---	---	---	---	---	---	---	---	---	---	---	66.90
10	---	---	67.84	---	---	---	67.61	---	67.08	---	---	---
11	---	---	---	---	---	67.82	---	---	---	---	---	---
12	---	67.60	---	---	67.74	---	---	---	---	---	66.82	---
13	---	---	---	---	67.72	---	---	---	---	---	---	---
14	---	---	---	67.72	---	---	---	67.46	---	---	---	---
15	67.76	---	---	---	---	---	67.60	---	---	67.14	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	67.00	---	---	---
18	---	---	67.94	---	67.68	---	---	---	---	---	---	---
19	---	---	---	---	---	67.76	---	---	---	---	66.96	---
20	---	67.66	67.82	---	---	---	---	67.33	---	---	---	---
21	---	---	---	---	---	---	---	---	---	67.08	---	---
22	67.70	---	---	67.90	---	---	67.63	---	---	---	---	---
23	---	67.94	---	---	---	---	---	---	---	---	---	66.78
24	---	---	---	---	---	67.74	---	---	---	---	---	---
25	---	67.94	67.80	---	67.62	---	---	---	67.10	---	---	66.77
26	---	---	---	---	---	---	---	67.28	---	---	67.00	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	67.62	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	67.86	---	---	67.40	---	---	66.96	---	---
30	---	---	---	---	---	---	---	---	---	---	---	66.78
31	67.62	---	67.80	---	---	67.62	---	67.18	---	---	---	---

OKLAWAHA RIVER BASIN

02237900 LAKE EUSTIS AT EUSTIS, FL

LOCATION.--Lat 28°51'06", long 81°41'29", in SE¼ sec.10, T.19 S., R.26 E., Lake County, Hydrologic Unit 03080102, on northeast shore of lake, on private pier at Eustis.

SURFACE AREA.--7,806 acres (12.2 mi^2).

DRAINAGE AREA.--646 mi^2.

PERIOD OF RECORD.--November 1935 to June 1942 (monthly); July 1942 to current year (once daily), incomplete. July 1942 to June 1956, records for Dead River near Tavares. Records of elevations prior to October 1960 are unpublished and avail-able in files of the Orlando Subdistrict office.

REVISED RECORDS.--WDR FL-72-3: Drainage area, surface area.

GAGE.--Nonrecording gage. Datum of gage is National Geodetic Vertical Datum of 1929. See WDR FL-80-1 for history of changes prior to Oct. 18, 1970.

REMARKS.--Lake is one of the Oklawaha River headwaters chain of lakes. Since 1956, lake levels have been partially controlled by lock and dam structure with gated spillway on Haines Creek.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation observed, 64.84 ft, Apr. 28, 1960; minimum observed, 58.82 ft, Sept. 22, 1956.

EXTREMES OUTSIDE PERIOD OF RECORD.--An elevation of 66.1 ft was reached in 1926, from information by local resident.

EXTREMES FOR CURRENT YEAR.--Maximum elevation observed, 63.30 ft, Mar. 6; minimum observed, 62.54 ft, June 5-7,14,15,19,20.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
INSTANT VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	62.92	62.64	62.86	62.96	63.24	63.12	63.10	---	62.55	---	62.71	62.77
2	62.92	62.64	62.84	62.94	63.24	63.18	63.10	---	---	62.80	62.73	62.77
3	62.92	62.62	62.82	63.00	63.24	63.22	63.06	---	---	62.84	62.74	62.77
4	---	62.68	62.84	62.90	63.26	63.16	63.06	---	---	---	62.72	62.77
5	---	---	62.82	62.90	63.26	63.26	63.18	---	62.54	62.84	62.72	62.78
6	---	62.70	62.80	62.90	63.26	63.30	63.16	---	62.54	62.88	62.70	62.80
7	62.82	62.66	62.84	62.90	63.28	63.26	63.20	---	62.54	62.88	62.72	62.82
8	62.80	62.66	62.82	62.90	63.26	63.20	63.08	---	62.55	---	62.70	62.80
9	62.80	62.64	62.84	62.90	63.20	63.18	63.08	---	62.56	---	62.67	62.79
10	62.82	62.64	62.84	62.90	63.20	63.16	63.06	---	62.58	62.68	62.65	62.78
11	62.88	62.64	62.80	62.90	63.20	63.18	62.98	---	62.58	62.66	62.66	62.77
12	62.82	62.66	62.84	62.92	63.16	63.22	62.92	---	62.58	62.64	62.73	62.76
13	62.80	62.66	62.90	62.92	63.16	63.20	62.96	---	62.56	62.62	62.75	62.75
14	62.76	62.60	62.88	62.92	63.18	63.16	62.92	---	62.54	62.66	62.77	62.75
15	62.70	62.62	62.90	62.92	63.18	63.16	63.06	---	62.54	62.64	62.78	62.76
16	62.76	62.64	62.86	62.90	63.16	63.16	63.04	---	---	62.64	62.76	62.75
17	62.76	62.66	62.90	62.90	63.14	63.14	63.00	---	---	62.70	62.73	62.74
18	62.76	62.60	62.86	62.90	63.14	63.16	63.00	---	---	62.60	62.70	62.74
19	62.76	62.62	62.88	62.88	63.16	63.18	63.00	---	62.54	62.60	62.66	62.76
20	62.74	62.66	62.88	62.90	63.16	63.18	63.02	---	62.54	62.61	62.67	62.76
21	62.78	62.64	62.88	62.90	63.16	63.20	63.00	---	62.58	62.62	62.77	62.75
22	62.76	62.66	62.88	63.06	63.20	63.18	62.90	---	62.60	62.64	62.78	62.75
23	62.70	62.88	62.88	63.10	63.20	63.18	62.96	---	62.68	62.70	62.76	62.74
24	62.70	62.90	62.90	63.14	63.18	63.16	62.96	---	62.74	62.70	62.75	62.74
25	62.64	62.90	62.90	63.16	63.12	63.16	62.96	---	---	62.68	62.74	62.75
26	62.64	62.90	62.90	63.20	63.10	63.18	62.96	---	62.76	62.67	62.72	62.76
27	62.66	62.90	62.90	63.20	63.14	63.16	---	---	62.78	62.67	62.72	62.76
28	62.64	62.90	62.90	63.20	63.14	63.14	62.94	---	62.82	62.67	62.71	62.76
29	62.64	62.86	62.90	63.24	---	63.16	---	---	62.82	62.69	62.70	62.77
30	62.64	62.86	62.90	63.24	---	63.16	---	62.60	62.84	62.70	62.70	62.76
31	62.64	---	62.92	63.22	---	63.24	---	---	---	62.70	62.69	---
MEAN	---	---	62.87	63.00	63.19	63.18	---	---	---	---	62.72	62.76
MAX	---	---	62.92	63.24	63.28	63.30	---	---	---	---	62.78	62.82
MIN	---	---	62.80	62.88	63.10	63.12	---	---	---	---	62.65	62.74

ST. JOHNS RIVER

OKLAWAHA RIVER BASIN

02238020 SILVER LAKE NEAR LEESBURG, FL

LOCATION.--Lat 28°50'26", long 81°48'38", in NE¼ sec.16, T.19 S., R.25 E., Lake County, Hydrologic Unit 03080102, on private pier, on west shore of lake, 3.5 mi northeast of Leesburg.

SURFACE AREA.--382 acres (0.60 mi^2).

DRAINAGE AREA.--1.50 mi^2.

PERIOD OF RECORD.--April 1983 to current year (weekly), incomplete.

GAGE.--Nonrecording gage. Datum of gage is National Geodetic Vertical Datum of 1929.

REMARKS.--Lake has no surface outlet.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation observed, 68.10 ft, Mar. 5, 1984; minimum observed, 65.08 ft, June 19, 1989.

EXTREMES FOR CURRENT YEAR.--Maximum elevation observed, 65.88 ft, Jan. 23,29; minimum observed, 65.08 ft, June 19.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
INSTANT VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	65.50	---	---	---	---
2	---	---	---	65.64	---	---	---	---	---	---	---	---
3	65.84	---	---	---	---	---	---	---	---	65.15	---	---
4	---	---	---	---	---	---	65.48	---	---	---	65.29	65.29
5	---	---	65.70	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	65.76	---	---	65.20	---	---	---
7	---	---	---	---	65.85	---	---	---	---	---	65.20	---
8	---	65.57	---	---	---	---	---	65.38	65.19	---	---	---
9	---	---	---	65.64	---	---	---	---	---	---	---	---
10	65.74	---	---	---	---	---	65.52	---	---	65.20	---	---
11	---	---	65.69	---	---	---	65.50	---	---	---	---	65.30
12	---	---	---	---	---	65.68	---	---	65.20	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	65.52	---	---	65.77	---	---	---	---	---	65.38	---
15	---	---	---	---	---	---	---	65.28	---	---	---	---
16	---	---	---	65.64	---	---	---	---	---	---	---	---
17	65.66	---	---	---	---	---	65.54	---	---	65.10	---	---
18	---	---	---	---	---	---	---	---	---	---	---	65.25
19	---	---	65.74	---	---	65.65	---	---	65.08	---	---	---
20	---	---	65.72	---	---	---	---	---	---	---	---	---
21	---	65.48	---	---	65.67	---	---	---	---	---	65.34	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	65.88	---	---	---	65.24	---	---	---	---
24	---	---	---	---	---	---	---	---	---	65.34	---	---
25	65.58	---	---	---	---	---	---	---	---	---	---	65.23
26	---	---	65.74	---	---	---	---	---	65.19	---	---	---
27	---	---	---	---	65.66	65.60	---	---	---	---	---	---
28	---	65.77	---	---	---	---	---	---	---	---	65.26	---
29	---	---	---	65.88	---	---	---	---	---	---	---	65.24
30	---	---	---	---	---	---	---	65.22	---	---	---	---
31	65.54	---	---	---	---	---	---	---	---	65.34	---	---

OKLAWAHA RIVER BASIN

02238180 HOLLY LAKE NEAR UMATILLA, FL

LOCATION.--Lat 28°56'11", long 81°43'04", in SW¼ sec.9, T.18 S., R.26 E., Lake County, Hydrologic Unit 03080102, on south shore of lake, at county boat ramp on State Highway 450, and 3.1 mi west of Umatilla.

SURFACE AREA.--96 acres (0.15 mi^2).

DRAINAGE AREA.--0.78 mi^2.

PERIOD OF RECORD.--October 1967 to October 1968 (thrice weekly); November 1968 to February 1970 (weekly); August 1982 to March 1983 (fragmentary); April 1983 to current year (weekly), incomplete.

GAGE.--Nonrecording gage. Datum of gage is National Geodetic Vertical Datum of 1929.

REMARKS.--At high stages Holly, Ella, and Yale Lakes are interconnected and some natural diversion occurs northward to Nicotoon Lake.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation observed, 61.43 ft, July 31, 1984; minimum observed, 56.54 ft, June 25, 1989.

EXTREMES FOR CURRENT YEAR.--Maximum elevation observed, 57.98 ft, Oct. 2; minimum observed, 56.54 ft, June 25.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1939
INSTANT VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	57.56	---	---	---	---	---	---	---	---
2	57.98	---	---	---	---	---	57.66	---	---	56.60	---	---
3	---	---	---	---	---	---	---	---	---	---	---	56.75
4	---	---	57.66	---	---	---	---	---	56.98	---	56.73	---
5	---	---	---	---	57.72	57.72	---	---	56.96	---	---	---
6	---	57.50	---	---	---	---	---	---	---	---	56.68	---
7	---	---	---	---	---	---	---	57.22	---	---	---	---
8	---	---	---	57.59	---	---	---	---	---	---	---	---
9	57.80	---	---	---	---	---	57.54	---	---	56.72	---	---
10	---	---	---	---	---	---	57.55	---	---	---	---	56.72
11	---	---	57.62	---	---	---	---	---	56.87	---	---	---
12	---	---	---	---	57.64	57.80	---	---	---	---	---	---
13	---	57.46	---	---	57.60	---	---	---	---	---	56.72	---
14	---	---	---	---	---	---	---	57.18	---	---	---	---
15	---	---	---	57.57	---	---	---	---	---	---	---	56.59
16	57.70	---	---	---	---	---	57.52	---	---	56.80	---	---
17	---	---	---	---	---	---	---	---	---	---	---	56.69
18	---	---	57.58	---	---	---	---	---	56.78	---	---	---
19	---	---	---	---	57.56	57.77	---	---	---	---	---	---
20	---	57.39	57.64	---	---	---	---	---	---	---	56.80	---
21	---	---	---	---	---	---	---	57.00	---	---	---	---
22	---	---	---	57.56	---	---	---	---	---	---	---	---
23	57.60	---	---	---	---	---	57.45	---	---	56.90	---	---
24	---	---	---	---	---	---	---	---	---	---	---	56.68
25	---	---	57.57	---	---	57.74	---	---	56.54	---	---	56.64
26	---	---	---	---	57.57	---	---	---	---	---	---	---
27	---	57.48	---	---	---	---	---	---	---	---	56.78	---
28	---	---	---	---	---	---	---	56.78	---	---	---	---
29	---	---	---	57.58	---	---	---	---	---	---	---	---
30	57.57	---	---	---	---	---	57.48	---	---	56.58	---	---
31	57.51	---	---	---	---	57.75	---	---	---	---	---	---

ST. JOHNS RIVER

OKLAWAHA RIVER BASIN

02238200 LAKE YALE AT GRAND ISLAND, FL

LOCATION.--Lat 28°52'52", long 81°42'21", in NW¼ sec.34, T.18 S., R.26 E., Lake County, Hydrologic Unit 03080102, at southeast end of lake, on east bank at end of stub canal in public park, 1 mi east of Grand Island, and 2.8 mi northwest of Eustis.

SURFACE AREA.--4,030 acres (6.30 mi^2).

DRAINAGE AREA.--67.6 mi^2.

PERIOD OF RECORD.--September 1959 to current year. Records of elevations prior to October 1960 are unpublished and available in files of the Orlando Subdistrict office.

REVISED RECORDS.--WDR FL-74-1: Surface area, drainage area.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.

REMARKS.--Water is diverted from the west side of the lake through Yale-Griffin Canal into Lake Griffin, one of the Oklawaha River headwaters chain of lakes.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily elevation, 61.29 ft, Oct. 12, 1960; minimum daily, 57.12 ft, Dec. 26, 1981.

EXTREMES FOR CURRENT YEAR.--Maximum daily elevation, 59.84 ft, Oct. 4; minimum daily, 59.14 ft, June 16.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	59.81	59.45	59.65	59.59	59.75	59.57	59.64	59.57	59.30	59.43	59.25	59.44
2	59.80	59.43	59.62	59.59	59.75	59.75	59.59	59.60	59.28	59.42	59.25	59.46
3	59.81	59.41	59.60	59.60	59.74	59.77	59.58	59.58	59.26	59.45	59.30	59.45
4	59.84	59.42	59.60	59.60	59.74	59.79	59.58	59.55	59.25	59.46	59.29	59.44
5	59.82	59.46	59.59	59.56	59.74	59.79	59.66	59.54	59.23	59.44	59.28	59.42
6	59.80	59.47	59.58	59.55	59.73	59.80	59.67	59.54	59.23	59.43	59.26	59.41
7	59.78	59.45	59.57	59.55	59.73	59.81	59.63	59.52	59.23	59.44	59.24	59.42
8	59.75	59.43	59.57	59.55	59.74	59.81	59.59	59.47	59.25	59.43	59.21	59.42
9	59.72	59.42	59.57	59.56	59.72	59.81	59.58	59.45	59.25	59.41	59.22	59.42
10	59.70	59.42	59.57	59.56	59.68	59.77	59.58	59.44	59.25	59.39	59.24	59.41
11	59.69	59.42	59.59	59.56	59.66	59.75	59.58	59.44	59.24	59.39	59.25	59.40
12	59.68	59.41	59.65	59.55	59.64	59.75	59.55	59.41	59.23	59.38	59.28	59.38
13	59.67	59.41	59.64	59.56	59.62	59.74	59.53	59.38	59.21	59.37	59.36	59.36
14	59.64	59.40	59.61	59.55	59.62	59.73	59.52	59.37	59.19	59.37	59.37	59.35
15	59.61	59.39	59.61	59.55	59.62	59.73	59.57	59.37	59.16	59.37	59.36	59.33
16	59.60	59.38	59.62	59.55	59.62	59.73	59.59	59.35	59.14	59.35	59.35	59.34
17	59.60	59.38	59.63	59.54	59.62	59.73	59.58	59.34	59.20	59.33	59.32	59.44
18	59.59	59.38	59.60	59.53	59.62	59.72	59.58	59.31	59.21	59.32	59.31	59.44
19	59.58	59.36	59.57	59.52	59.61	59.72	59.57	59.29	59.21	59.32	59.31	59.44
20	59.57	59.36	59.57	59.52	59.59	59.71	59.57	59.28	59.22	59.32	59.33	59.42
21	59.57	59.36	59.57	59.58	59.59	59.70	59.56	59.27	59.25	59.34	59.37	59.41
22	59.56	59.39	59.57	59.77	59.65	59.69	59.54	59.26	59.25	59.32	59.36	59.38
23	59.53	59.71	59.58	59.78	59.68	59.69	59.52	59.25	59.25	59.33	59.36	59.43
24	59.52	59.70	59.58	59.76	59.58	59.71	59.51	59.23	59.35	59.32	59.34	59.42
25	59.51	59.68	59.58	59.75	59.55	59.69	59.50	59.22	59.36	59.33	59.35	59.43
26	59.49	59.66	59.58	59.75	59.53	59.68	59.49	59.21	59.36	59.31	59.36	59.45
27	59.47	59.67	59.58	59.76	59.52	59.67	59.48	59.20	59.36	59.30	59.35	59.46
28	59.47	59.70	59.58	59.75	59.52	59.66	59.47	59.20	59.35	59.30	59.33	59.45
29	59.47	59.66	59.56	59.75	---	59.65	59.44	59.28	59.39	59.28	59.32	59.44
30	59.46	59.65	59.59	59.75	---	59.64	59.49	59.31	59.42	59.26	59.30	59.43
31	59.45	---	59.58	59.75	---	59.66	---	59.32	---	59.26	59.31	---
MEAN	59.63	59.48	59.59	59.62	59.65	59.72	59.56	59.37	59.26	59.36	59.31	59.42
MAX	59.84	59.71	59.65	59.78	59.75	59.81	59.67	59.60	59.42	59.46	59.37	59.46
MIN	59.45	59.36	59.57	59.52	59.52	59.57	59.44	59.20	59.14	59.26	59.21	59.33

CAL YR 1988 MEAN 59.28 MAX 59.97 MIN 58.59
WTR YR 1989 MEAN 59.50 MAX 59.84 MIN 59.14

02238300 LAKE GRIFFIN AT LEESBURG, FL

LOCATION.--Lat 28°51'48", long 81°51'31", in SE¼ sec.1, T.19 S., R.24 E., Lake County, Hydrologic Unit 03080102, on western portion of lake, on private boat pier at Twin Palms Marina, 3.7 mi north of Leesburg.

SURFACE AREA.--10,660 acres (16.7 mi^2).

DRAINAGE AREA.--775 mi^2

PERIOD OF RECORD.--May 1936 to September 1944 (monthly); October 1944 to October 1952 (weekly); November 1952 to May 1955 (twice weekly); June 1955 to current year (once-daily), incomplete. Records of elevations prior to October 1960 are unpublished and available in files of the Orlando Subdistrict office.

REVISED RECORDS.--WDR FL-74-1: Drainage area, surface area.

GAGE.--Nonrecording gage. Datum of gage is National Geodetic Vertical Datum of 1929. Since November 1978 at present site and datum. For history of changes prior to November 1978, see WDR FL-80-1.

REMARKS.--Lake is the most downstream of the Oklawaha River headwaters chain of lakes. Lake levels are partially controlled by earthen dam and concrete control with vertical lift gates on Oklawaha River at Moss Bluff.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation observed, 60.74 ft, Oct. 11,12, 1960; minimum observed, 52.14 ft, June 29, July 2, 1984, result of drawdown.

EXTREMES FOR CURRENT YEAR.--Maximum elevation observed, 59.24 ft, Feb. 5-8; minimum observed, 58.32, Nov. 21-22.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
INSTANT VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	58.80	58.44	58.78	58.84	59.18	59.20	59.06	58.88	58.70	58.96	58.66	58.72
2	58.80	58.42	58.78	58.84	59.20	59.18	59.06	58.88	58.66	58.98	58.70	58.76
3	58.76	58.41	58.78	58.84	59.22	59.16	59.02	58.86	58.62	58.94	58.68	58.76
4	58.82	58.41	58.76	58.84	59.22	59.18	59.00	58.82	58.62	58.88	58.66	58.74
5	58.84	58.40	58.74	58.82	59.24	59.16	59.14	58.80	58.58	58.88	58.66	58.76
6	58.82	58.42	58.72	58.82	59.24	59.18	59.20	58.76	58.58	58.78	58.62	58.76
7	58.76	58.44	58.72	58.82	59.24	59.18	59.16	58.74	58.56	58.78	58.60	58.76
8	58.72	58.42	58.72	58.82	59.24	59.22	59.10	58.68	58.58	58.74	58.58	58.80
9	58.70	58.40	58.72	58.82	59.22	59.22	59.10	58.66	58.58	58.64	58.56	58.80
10	58.66	58.40	58.72	58.82	59.20	59.20	59.08	58.62	58.60	58.56	58.64	58.80
11	58.64	58.40	58.72	58.84	59.16	59.18	59.04	58.64	58.62	58.52	58.66	58.80
12	58.64	58.39	58.74	58.84	59.12	59.18	58.98	58.60	58.58	58.52	58.67	58.80
13	58.62	58.38	58.80	58.86	59.12	59.16	58.94	58.58	58.58	58.50	58.78	58.78
14	58.60	58.38	58.78	58.86	59.12	59.12	58.94	58.58	58.56	58.48	58.88	58.78
15	58.58	58.38	58.78	58.84	59.10	59.12	58.94	58.58	58.54	58.48	58.82	58.76
16	58.57	58.36	58.78	58.86	59.08	59.10	58.94	58.58	58.52	58.47	58.80	58.74
17	58.56	58.36	58.78	58.88	59.08	59.13	58.98	58.56	58.54	58.45	58.78	58.80
18	58.56	58.34	58.78	58.86	59.08	59.10	59.00	58.56	58.56	58.48	58.76	58.76
19	58.54	58.34	58.78	58.86	59.08	59.10	58.98	58.54	58.56	58.50	58.74	58.78
20	58.54	58.34	58.76	58.84	59.08	59.10	58.94	58.52	58.56	58.52	58.80	58.78
21	58.52	58.32	58.76	58.90	59.06	59.08	58.94	58.50	58.56	58.62	58.84	58.76
22	58.52	58.32	58.74	59.08	59.06	59.06	58.92	58.50	58.75	58.62	58.82	58.74
23	58.52	58.68	58.78	59.10	59.04	59.06	58.92	58.52	58.78	58.70	58.80	58.74
24	58.50	58.70	58.78	59.12	59.02	59.06	58.92	58.50	58.80	58.72	58.80	58.76
25	58.48	58.72	58.78	59.12	59.00	59.06	58.90	58.50	58.76	58.72	58.76	58.76
26	58.46	58.74	58.78	59.14	58.88	59.06	58.88	58.48	58.78	58.72	58.74	58.76
27	58.46	58.76	58.80	59.16	58.88	59.04	58.88	58.48	58.76	58.70	58.70	58.78
28	58.46	58.76	58.80	59.16	58.88	59.04	58.84	58.46	58.72	58.66	58.70	58.78
29	58.44	58.76	58.78	59.16	---	59.02	58.84	58.66	58.68	58.60	58.68	58.80
30	58.44	58.80	58.80	59.16	---	59.04	58.82	58.70	58.86	58.66	58.66	58.80
31	58.44	---	58.78	59.16	---	59.06	---	58.72	---	58.62	58.62	---
MEAN	58.61	58.48	58.77	58.94	59.11	59.12	58.98	58.63	58.64	58.66	58.72	58.77
MAX	58.84	58.80	58.80	59.16	59.24	59.22	59.20	58.88	58.86	58.98	58.88	58.80
MIN	58.44	58.32	58.72	58.82	58.88	59.02	58.82	58.46	58.52	58.45	58.56	58.72

WTR YR 1989 MEAN 58.78 MAX 59.24 MIN 58.32

02238800 LAKE WEIR AT OKLAWAHA, FL

LOCATION.--Lat 29°02'23", long 81°55'44", in SE¼ sec.5, T.17 S., R.24 E., Marion County, Hydrologic Unit 03080102, on north shore of lake, on east side of pier, 100 ft east of Johnson's Beach Pavillion at Oklawaha.

SURFACE AREA.--5,760 acres (9.00 mi^2).

DRAINAGE AREA.--53.8 mi^2.

PERIOD OF RECORD.--April 1936 to October 1942 (monthly means only), November 1942 to current year. Records of elevations prior to October 1960 are unpublished and available in files of the Jacksonville Field Headquarters.

REVISED RECORDS.--WDR FL-74-1: Surface area, drainage area.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers). Prior to Nov. 4, 1942, nonrecording gage at site 100 ft west at datum 56.58 ft higher. Nov. 4, 1942, to Mar. 22, 1956, water-stage recorder at datum 55.58 ft higher and Mar. 23, 1956, to Feb. 7, 1957, at datum 54.00 ft higher, at sites within 100 ft.

REMARKS.--Lake level partly controlled by broad-crested weir in outlet canal to the Oklawaha River; elevation of fixed crest is 57.44 ft. Canal dug and control built in April 1938.

EXTREMES FOR PERIOD OF RECORD.--Maximum monthly mean elevation, 59.6 ft, Jan. 1938; minimum daily, 53.46 ft, May 9, 1957.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	56.58	56.18	56.18	56.06	56.07	55.88	55.87	55.99	55.69	55.95	55.75	56.05
2	56.57	56.17	56.15	56.07	56.07	56.01	55.85	55.98	55.68	55.94	55.76	56.07
3	56.58	56.15	56.14	56.07	56.07	56.05	55.84	55.96	55.66	55.94	55.75	56.06
4	56.59	56.16	56.13	56.05	56.06	56.06	55.87	55.95	55.64	55.92	55.74	56.04
5	56.57	56.18	56.11	56.04	56.06	56.07	56.04	55.94	55.63	55.91	55.72	56.03
6	56.53	56.18	56.10	56.03	56.06	56.07	56.03	55.92	55.63	55.90	55.71	56.03
7	56.50	56.16	56.10	56.03	56.06	56.06	56.00	55.89	55.65	55.89	55.69	56.04
8	56.46	56.15	56.10	56.03	56.05	56.05	55.97	55.87	55.68	55.87	55.66	56.04
9	56.44	56.14	56.10	56.02	56.02	56.02	55.96	55.85	55.68	55.85	55.65	56.03
10	56.43	56.14	56.09	56.02	55.99	56.00	55.96	55.84	55.67	55.84	55.68	56.02
11	56.42	56.13	56.11	56.01	55.97	55.99	55.94	55.83	55.66	55.83	55.65	56.01
12	56.40	56.12	56.14	56.02	55.96	55.99	55.91	55.81	55.65	55.85	55.70	55.99
13	56.37	56.12	56.13	56.02	55.95	55.98	55.89	55.79	55.67	55.86	55.78	55.98
14	56.34	56.11	56.12	56.01	55.94	55.98	55.91	55.78	55.65	55.86	55.78	55.97
15	56.32	56.11	56.11	56.01	55.94	55.98	56.02	55.69	55.64	55.85	55.77	55.95
16	56.31	56.10	56.11	56.01	55.94	55.97	56.03	55.75	55.61	55.85	55.75	55.96
17	56.29	56.10	56.10	56.00	55.92	55.97	56.03	55.74	55.59	55.86	55.73	55.98
18	56.29	56.09	56.08	55.99	55.91	55.97	56.02	55.71	55.59	55.84	55.72	55.96
19	56.28	56.09	56.07	55.98	55.90	55.96	56.02	55.69	55.60	55.83	55.72	55.94
20	56.28	56.08	56.06	55.97	55.90	55.96	56.01	55.68	55.60	55.81	55.74	55.92
21	56.27	56.08	56.06	56.00	55.91	55.96	55.98	55.68	55.70	55.80	55.78	55.89
22	56.26	56.09	56.06	56.08	55.93	55.94	55.97	55.67	55.84	55.79	55.77	55.89
23	56.24	56.26	56.06	56.10	55.90	55.94	55.96	55.66	55.86	55.80	55.76	55.91
24	56.24	56.26	56.06	56.09	55.86	55.95	55.95	55.64	55.93	55.81	55.75	55.90
25	56.22	56.24	56.06	56.09	55.83	55.93	55.94	55.62	55.92	55.84	55.78	55.91
26	56.20	56.24	56.06	56.08	55.82	55.92	55.93	55.61	55.91	55.82	55.89	55.91
27	56.20	56.24	56.06	56.08	55.82	55.92	55.92	55.61	55.90	55.81	55.88	55.93
28	56.19	56.24	56.06	56.08	55.81	55.91	55.91	55.61	55.89	55.80	55.89	56.00
29	56.18	56.21	56.06	56.08	---	55.90	55.89	55.73	55.91	55.79	55.88	56.01
30	56.17	56.19	56.06	56.08	---	55.91	55.94	55.72	55.94	55.77	55.86	56.00
31	56.17	---	56.06	56.07	---	55.91	---	55.70	---	55.77	55.90	---
MEAN	56.35	56.16	56.09	56.04	55.95	55.97	55.95	55.77	55.72	55.85	55.76	55.98
MAX	56.59	56.26	56.18	56.10	56.07	56.07	56.04	55.99	55.94	55.95	55.90	56.07
MIN	56.17	56.08	56.06	55.97	55.81	55.88	55.84	55.61	55.59	55.77	55.65	55.89

CAL YR 1988 MEAN 56.29 MAX 56.83 MIN 55.62
WTR YR 1989 MEAN 55.97 MAX 56.59 MIN 55.59

ST.JOHNS RIVER

OKLAWAHA RIVER BASIN

02238820 SMITH LAKE NEAR CANDLER, FL

LOCATION.--Lat 29°04'12", long 81°59'25", in NE¼ sec.27, T.16 S., R.23 E., Marion County, Hydrologic Unit 03080102, on north shore of lake, on north side of private pier, 1.1 mi west of Candler.

SURFACE AREA.--482 acres (0.75 mi^2).

DRAINAGE AREA.--5.01 mi^2.

PERIOD OF RECORD.--July 1972 to current year (monthly).

GAGE.--Nonrecording gage. Datum of gage is National Geodetic Vertical Datum of 1929.

REMARKS.--Lake is landlocked. There is some pumpage from lake for irrigation purposes.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation observed, 57.82 ft, Feb. 14, 1984; minimum observed, 49.70 ft, Dec. 24, 1981.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	ELEVATION ABOVE NGVD (FEET)	DATE	TIME	ELEVATION ABOVE NGVD (FEET)
OCT			APR		
17...	1120	53.60	03...	1055	53.28
19...	0950	53.60	26...	0945	53.28
NOV			MAY		
19...	1030	53.45	22...	1700	52.60
DEC			JUN		
05...	1050	53.62	05...	1220	52.58
15...	1030	53.60	22...	1030	52.19
JAN			JUL		
25...	1100	53.45	24...	1000	52.66
FEB			31...	1310	52.44
06...	1120	53.46	AUG		
20...	1100	53.30	22...	1045	52.22
MAR			SEP		
20...	1100	53.50	20...	0930	52.20

ST.JOHNS RIVER

OKLAWAHA RIVER BASIN

02238830 BOWERS LAKE NEAR OKLAWAHA, FL

LOCATION.--Lat 29°02'22", long 81°57'24", in SE¼ sec.1, T.17 S., R.23 E., Marion County, Hydrologic Unit 03080102, on southwest shore of lake, at Lakefront Apartments, 1.6 mi west of Oklawaha.

SURFACE AREA.--633 acres (0.99 mi^2).

DRAINAGE AREA.--8.48 mi^2.

PERIOD OF RECORD.--July 1972 to current year (monthly).

GAGE.--Nonrecording gage. Datum of gage is National Geodetic Vertical Datum of 1929. Prior to Dec. 12, 1981, at site 0.4 mi west at same datum.

REMARKS.--Lake is landlocked except at high stages when outflow is to the northeast to Lake Weir outlet, thence to Oklawaha River. There is some pumpage from lake for irrigation purposes.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation observed, 58.52 ft, Sept. 1, 1983; minimum observed, 53.50 ft, Oct. 30, 1981.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	ELEVATION ABOVE NGVD (FEET)	DATE	TIME	ELEVATION ABOVE NGVD (FEET)
OCT			APR		
17...	1110	56.40	03...	1045	55.98
21...	0755	56.40	29...	0800	55.90
NOV			MAY		
22...	0820	56.20	31...	0745	55.60
23...	0830	56.45	JUN		
DEC			05...	1200	55.50
05...	1040	56.39	21...	0740	55.90
24...	0650	56.36	JUL		
JAN			31...	1300	55.67
29...	0830	56.30	AUG		
FEB			04...	0745	55.65
06...	1110	56.23	26...	0900	55.62
MAR			SEP		
04...	0805	55.50	21...	0750	55.80
25...	0730	56.18			

ST.JOHNS RIVER

OKLAWAHA RIVER BASIN

02240200 LAKE BRYANT NEAR SILVER SPRINGS, FL

LOCATION.--Lat 29°08'21", long 81°51'03", in SW¼ sec.31, T.15 S., R.25 E., Marion County, Hydrologic Unit 03080102, on southeast shore on private pier, 4.4 mi northeast of Moss Bluff Dam, and 13.5 mi southeast of Silver Springs.

SURFACE AREA.--1,261 acres (1.97 mi^2). Does not include North Lake.

DRAINAGE AREA.--9.86 mi^2.

PERIOD OF RECORD.--April 1936 to April 1950, July 1972 to current year (monthly). Records of elevation prior to July 1972 are unpublished and available in files of the Jacksonville Field Headquarters.

GAGE.--Nonrecording gage. Datum of gage is National Geodetic Vertical Datum of 1929. April 1936 to April 1950, nonrecording gage on northeast side of lake at datum, 53.36 ft higher.

REMARKS.--Lake is in a chain of lakes in the western part of the Ocala National Forest. Outflow is to the east to Halfmoon Lake.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation observed, 54.8 ft, October 1945; minimum observed, 50.20 ft, Dec. 2, 1981.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	ELEVATION ABOVE NGVD (FEET)	DATE	TIME	ELEVATION ABOVE NGVD (FEET)
OCT			APR		
17...	0920	52.64	01...	0900	52.10
27...	0900	52.80	03...	0900	51.97
NOV			JUN		
29...	1100	52.60	05...	0945	51.72
DEC			JUL		
05...	0835	52.52	26...	1230	51.60
27...	0900	52.50	31...	1130	51.68
FEB			AUG		
06...	0900	52.29	23...	0900	51.80
			SEP		
			10...	0920	52.00

ST. JOHNS RIVER

OKLAWAHA RIVER BASIN

02240900 NEWNANS LAKE NEAR GAINESVILLE, FL

LOCATION.--Lat 29°39'04", long 82°14'22", in SE¼, sec.6, T.10 S., R.21 E., Alachua County, Hydrologic Unit 03080102, on west shore of lake, 5 mi east of Gainesville.

SURFACE AREA.--7,350 acres (11.5 mi^2).

DRAINAGE AREA.--114 mi^2.

PERIOD OF RECORD.--April 1936 to October 1945 (monthly), incomplete; November 1945 to January 1946 and June 1946 to December 1952 (twice weekly), incomplete; July 1957 to September 1960; October 1960 to September 1962 (weekly), incomplete; October 1962 to July 1965 (fragmentary); August 1965 to March 1989 (weekly), incomplete; April to September 1989 (once-daily). Records of elevations prior to October 1960 are unpublished and are available in files of the Jacksonville Field Headquarters.

REVISED RECORDS.--WDR FL-74-3: Drainage area. WDR FL-81-1: Surface area.

GAGE.--Nonrecording gage. Datum of gage is National Geodetic Vertical Datum of 1929. Prior to Nov. 2, 1945, at approximately present site at datum 65.21 ft higher. Nov. 2, 1945, to Dec. 31, 1952, and July 15, 1957, to July 24, 1986, at several sites within 500 ft of present site at datum 63.33 ft higher.

REMARKS.--Outflow from lake is through Prairie Creek to Camps Canal and thence through River Styx to Orange Lake; some diversion of outflow to Paynes Prairie for irrigation. Since November 1966, lake level partially controlled by concrete dam in Prairie Creek at lake outlet; present control, completed in March 1976, has crest elevation at 66.8 ft with removable boards. Daily record collected during period of drawdown, Apr. 2 to Sept. 30.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation observed, 71.21 ft, Mar. 12, 1948; minimum observed, 63.87 ft, May 19, 1962.

EXTREMES FOR CURRENT YEAR.--Maximum elevation observed, 67.62 ft, Oct. 1; minimum observed, 64.68 ft, June 15,16.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
INSTANT VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	67.62	66.85	---	---	66.36	---	---	65.60	64.84	64.92	65.12	65.30
2	---	---	66.60	66.50	---	66.25	66.00	65.61	64.82	64.92	65.14	65.26
3	---	---	---	---	---	---	66.00	65.60	64.80	64.89	65.16	65.24
4	---	---	---	---	---	---	65.97	65.58	64.78	65.00	65.16	---
5	---	---	---	---	---	---	65.95	65.55	64.80	65.00	65.16	65.26
6	---	---	---	---	---	---	65.90	65.48	64.82	64.98	65.14	65.28
7	67.59	---	---	---	66.30	---	65.90	65.45	64.84	64.96	65.10	---
8	---	---	66.51	---	---	---	65.90	65.45	64.85	64.94	65.19	65.26
9	---	---	---	---	66.28	---	65.88	65.40	64.78	64.90	---	65.24
10	---	---	---	---	---	66.27	65.85	65.30	64.78	64.86	65.16	65.24
11	---	66.63	---	---	---	---	65.85	65.35	64.78	64.84	65.18	65.22
12	---	---	66.55	---	---	---	65.83	65.28	64.78	64.74	65.24	65.20
13	---	---	---	---	---	---	65.80	65.28	64.74	64.80	65.26	65.18
14	---	---	---	66.40	66.29	---	65.81	65.24	64.70	64.80	65.36	65.12
15	67.50	---	---	---	---	---	65.82	65.24	64.68	64.82	65.37	65.12
16	---	---	---	---	---	---	65.90	65.20	64.68	64.82	65.36	65.20
17	---	---	---	---	---	---	65.90	65.16	64.74	---	65.34	65.26
18	---	---	---	---	---	66.10	65.89	65.14	64.74	64.84	65.36	65.35
19	---	---	---	---	---	---	65.88	65.10	64.80	64.85	65.36	65.34
20	67.32	66.55	---	---	---	---	65.85	65.08	64.85	64.85	65.36	65.35
21	67.32	---	66.55	---	---	---	65.83	65.05	64.80	64.87	65.38	65.35
22	---	---	---	---	66.25	---	65.85	65.05	64.80	64.97	65.38	65.36
23	---	66.65	---	66.40	---	---	65.80	65.02	---	65.00	65.34	65.44
24	---	---	---	---	---	---	65.80	65.00	64.80	65.10	65.32	65.46
25	---	---	---	---	---	---	65.78	65.05	64.78	65.14	65.30	65.50
26	---	---	---	---	---	66.15	65.75	65.00	64.74	65.18	65.30	65.54
27	---	---	---	---	---	---	65.70	64.98	64.72	65.10	65.28	65.56
28	67.00	---	---	---	66.20	---	65.62	64.95	64.72	65.10	65.30	65.65
29	---	---	---	---	---	---	65.61	64.90	64.74	65.10	65.28	65.68
30	---	---	---	66.36	---	---	65.60	64.92	64.86	65.10	65.26	65.60
31	---	---	66.50	---	---	---	---	64.90	---	---	65.26	---

OKLAWAHA RIVER BASIN

02240958 LAKE KANAPAHA AT ARREDONDO, FL

LOCATION.--Lat 29°36'44", long 82°24'14", in NW¼ sec.22, T.10 S., R.19 E., Alachua County, Hydrologic Unit 03080102, on south shore of lake at Broken Arrow Bluff Mobile Homes Park, 0.6 mi northeast of Arredondo, and 5.4 mi southwest of Gainesville.

SURFACE AREA.--204 acres (0.32 mi^2).

DRAINAGE AREA.--8.65 mi^2.

PERIOD OF RECORD.--November 1971 to current year (weekly), incomplete.

REVISED RECORDS.--WDR FL-73-3: Surface area.

GAGE.--Nonrecording gage. Datum of gage is National Geodetic Vertical Datum of 1929.

REMARKS.--Outflow from lake is into Haile Sink.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation observed, 60.02 ft, Sept. 8, 1988; lake dry at gage Oct. 27 to Nov. 29, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum elevation observed, 58.15 ft, Oct. 5; minimum observed, 50.67 ft, Aug. 3.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
INSTANT VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	52.70	---	---	---	---	---	51.80	---	---	50.80
2	---	55.55	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	51.85	51.95	---	51.35	---	---	50.67	---
4	---	---	---	---	---	---	---	---	---	---	50.80	---
5	58.15	---	---	52.00	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	51.59	---	50.75	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	52.34	---	---	---	---	---	51.00	---	---	---
9	---	---	---	---	51.88	---	---	---	---	---	50.70	50.82
10	---	54.35	---	---	51.87	51.90	---	---	---	---	---	---
11	57.86	---	---	---	---	---	---	51.15	---	---	---	---
12	---	---	---	52.00	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	51.50	---	---	---	---	---
15	---	---	52.20	---	---	---	---	---	---	50.85	---	50.85
16	---	---	---	---	51.85	51.85	---	---	50.80	---	---	---
17	---	52.00	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	51.00	---	---	50.80	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	56.06	---	---	51.90	---	---	---	---	---	50.90	---	50.90
21	---	---	---	---	---	---	51.45	---	---	---	---	---
22	---	---	52.15	---	---	---	---	---	---	---	---	---
23	---	---	---	---	51.87	51.76	---	---	50.80	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	52.90	---	---	---	---	---	---	---	---	50.80	---
26	---	---	---	51.95	---	---	---	50.85	---	---	---	---
27	55.16	---	---	---	---	---	51.45	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	50.90	---	51.00
29	---	---	52.05	---	---	---	---	---	50.86	---	---	---
30	---	---	---	---	---	51.70	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---

ST. JOHNS RIVER

OKLAWAHA RIVER BASIN

02242400 LOCHLOOSA LAKE AT LOCHLOOSA, FL

LOCATION.--Lat 29°30'07", long 82°06'12", in SW¼ sec.27, T.11 S., R.22 E., Alachua County, Hydrologic Unit 03080102, on east shore of lake, at Finway Fish Camp, at Lochloosa.

SURFACE AREA.--8,800 acres (13.7 mi^2).

DRAINAGE AREA.--88.0 mi^2.

PERIOD OF RECORD.--April and May 1936 (monthly), July 1942 to December 1952, April 1956 to September 1960, October 1960 to May 1961 (about twice weekly), July 1961 to March 1962 (weekly), April 1962 to July 1965 (fragmentary), August 1965 to April 1989 (weekly), incomplete, July to September 1989. Records of elevations prior to October 1960 are unpublished and are available in files of the Jacksonville Field Headquarters.

REVISED RECORDS.--WDR FL-80-1: Drainage area. WDR FL-74-3: Surface area.

GAGE.--Water-stage recorder. Datum of gage is 48.83 ft above National Geodetic Vertical Datum of 1929; gage readings have been reduced to elevations above NGVD. Prior to April 5, 1989, nonrecording gage at several sites within 0.3 mi south at following datums: April 1936, to July 9, 1942, 6.55 ft higher; July 10, 1942, to Dec. 31, 1952, 7.00 ft higher; and Jan. 1, 1953 to April 5, 1989 at present datum.

REMARKS.--Outflow from lake is through Cross Creek to Orange Lake; some overflow occurs through Lochloosa Slough (station 02242500) to Orange Creek.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation observed, 61.94 ft, Mar. 16, 1948; minimum observed, 53.88 ft, Aug. 18, 1956.

EXTREMES OUTSIDE PERIOD OF RECORD.--An elevation of 62.0 ft was reached in October 1941, from floodmark.

EXTREMES FOR CURRENT YEAR.--Maximum elevation observed, 59.09 ft, Oct. 8; minimum daily, 56.47 ft, Sept. 21,22.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	59.07	---	---	---	---	---	---	---	---	---	56.98	56.71
2	---	---	---	---	---	---	---	---	---	---	56.98	56.70
3	---	---	58.33	---	---	---	---	---	---	---	56.99	56.68
4	---	---	---	---	---	---	---	---	---	---	56.98	56.71
5	---	58.40	---	---	---	---	57.57	---	---	---	56.98	56.71
6	---	---	---	---	---	---	---	---	---	---	56.97	56.72
7	---	---	58.34	---	---	---	---	---	---	---	56.96	56.70
8	59.09	---	---	---	57.97	---	---	---	---	---	56.93	56.69
9	---	---	---	---	---	---	---	---	---	---	56.92	56.67
10	---	---	---	---	---	---	---	---	---	---	56.91	56.65
11	---	---	---	---	---	---	---	---	---	---	56.89	56.63
12	---	58.33	---	---	---	---	---	---	---	---	56.89	56.60
13	---	---	---	---	---	---	---	---	---	---	56.88	56.59
14	---	---	---	---	---	---	---	---	---	---	56.88	56.59
15	59.01	---	---	---	---	---	---	---	---	---	56.89	56.58
16	---	---	---	---	---	---	---	---	---	---	56.88	56.56
17	---	---	---	---	---	---	---	---	---	---	56.86	56.55
18	---	---	---	---	---	---	---	---	---	---	56.84	56.53
19	58.77	58.30	---	---	---	---	---	---	---	---	56.83	56.50
20	---	---	---	---	---	---	---	---	---	---	56.83	56.48
21	---	---	---	---	---	---	---	---	---	56.77	56.81	56.47
22	58.79	---	---	---	---	---	---	---	---	56.87	56.80	56.47
23	---	---	---	---	---	---	---	---	---	56.99	56.77	56.51
24	---	---	---	---	---	---	---	---	---	57.05	56.76	56.53
25	---	---	---	---	---	---	---	---	---	57.04	56.74	56.60
26	---	58.28	---	---	---	---	---	---	---	57.03	56.73	56.62
27	---	---	---	---	---	---	---	---	---	57.01	56.77	56.61
28	---	---	---	---	---	---	---	---	---	57.00	56.75	56.61
29	58.59	---	---	---	---	---	---	---	---	56.99	56.72	56.61
30	---	---	---	---	---	---	---	---	---	56.97	56.70	56.59
31	---	---	---	---	---	---	---	---	---	56.96	56.69	---
MEAN	---	---	---	---	---	---	---	---	---	---	56.86	56.61
MAX	---	---	---	---	---	---	---	---	---	---	56.99	56.72
MIN	---	---	---	---	---	---	---	---	---	---	56.69	56.47

ST. JOHNS RIVER

OKLAWAHA RIVER BASIN

02242450 ORANGE LAKE AT ORANGE LAKE, FL

LOCATION.--Lat 29°25'37", long 82°12'26", in SE¼, sec.21, T. 12 S., R.21 E., Alachua County, Hydrologic Unit 03080102, on south shore of southwest bay of lake, at public boat landing in town of Orange Lake.

SURFACE AREA.--13,160 acres (20.6 mi^2).

DRAINAGE AREA.--1,012 mi^2, includes drainage area of Paynes Prairie, a diked sinkhole area of 650 mi^2, approximately, which is noncontributing except by pumpage.

PERIOD OF RECORD.--May 1933 to March 1934 and November 1935 to June 1942 (monthly), July 1942 to current year. July 1942 to May 1955, records for Orange Lake Outlet near Citra. Records of elevations prior to October 1960 are unpublished and are available in files of the Jacksonville Field Headquarters.

REVISED RECORDS.--WDR FL-74-1: Surface area. WDR FL-78-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929. Prior to July 2, 1942, nonrecording gage at approximately present site at datum 56.24 ft higher. July 2, 1942, to June 27, 1943, nonrecording gage at lake outlet at datum 55.41 ft higher. June 28, 1943, to Mar. 28, 1947, nonrecording gage and Mar. 28, 1947, to May 31, 1955, water-stage recorder, at lake outlet at datum 53.41 ft higher. July 8, 1955, to Sept. 30, 1957, nonrecording gages at several sites between Boardman and present site at various datums.

REMARKS.--Since April 1963, outlet controlled by concrete dam 160 ft long; elevation of crest is 58.0 ft with notch in center at elevation 55.5 ft. Outflow from lake is through Orange Creek to Oklawaha River. Elevation at gage subject to fluctuations caused by wind action.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation observed, 61.95 ft, Mar. 19, 1948 (near Boardman); minimum observed, 50.38 ft, Aug. 11, 1956.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	58.99	58.43	58.35	58.10	57.91	57.69	57.46	57.11	56.56	56.66	56.59	56.32
2	58.96	58.41	58.34	58.09	57.92	57.75	57.43	57.13	56.53	56.67	56.64	56.35
3	58.96	58.39	58.31	58.06	57.90	57.76	57.41	57.13	56.50	56.65	56.70	56.32
4	59.00	58.36	58.29	58.07	57.90	57.78	57.39	57.11	56.47	56.63	56.68	56.31
5	59.01	58.35	58.29	58.06	57.89	57.78	57.43	57.07	56.48	56.61	56.65	56.35
6	59.00	58.37	58.28	58.03	57.88	57.75	57.46	57.03	56.57	56.60	56.62	56.35
7	58.92	58.36	58.26	58.04	57.86	57.76	57.38	57.02	56.60	56.60	56.57	56.35
8	58.91	58.35	58.25	58.03	57.87	57.79	57.37	57.00	56.65	56.57	56.56	56.34
9	58.87	58.34	58.24	58.03	57.87	57.78	57.36	56.95	56.63	56.55	56.57	56.32
10	58.85	58.32	58.24	58.04	57.84	57.77	57.35	56.91	56.63	56.53	56.59	56.29
11	58.83	58.31	58.27	58.04	57.80	57.72	57.40	56.94	56.63	56.50	56.57	56.27
12	58.82	58.30	58.31	58.02	57.78	57.69	57.39	56.91	56.62	56.47	56.56	56.25
13	58.83	58.28	58.26	58.01	57.77	57.66	57.36	56.90	56.60	56.44	56.56	56.23
14	58.80	58.28	58.24	58.01	57.77	57.65	57.34	56.87	56.58	56.42	56.55	56.21
15	58.77	58.28	58.23	57.98	57.76	57.66	57.37	56.85	56.57	56.41	56.52	56.20
16	58.75	58.26	58.24	57.97	57.75	57.66	57.40	56.84	56.61	56.39	56.50	56.20
17	58.72	58.27	58.23	57.97	57.79	57.67	57.40	56.83	56.60	56.38	56.49	56.20
18	58.70	58.27	58.22	57.95	57.76	57.64	57.38	56.82	56.60	56.38	56.47	56.20
19	58.67	58.25	58.21	57.94	57.74	57.64	57.35	56.79	56.62	56.37	56.46	56.18
20	58.66	58.21	58.20	57.94	57.70	57.61	57.34	56.76	56.61	56.38	56.49	56.15
21	58.62	58.22	58.19	58.04	57.68	57.56	57.35	56.76	56.59	56.41	56.47	56.12
22	58.61	58.27	58.19	58.09	57.76	57.57	57.32	56.75	56.59	56.54	56.45	56.11
23	58.59	58.41	58.18	58.03	57.69	57.56	57.29	56.72	56.62	56.64	56.42	56.18
24	58.56	58.36	58.17	58.01	57.69	57.57	57.26	56.69	56.67	56.71	56.40	56.22
25	58.55	58.34	58.16	58.00	57.69	57.57	57.24	56.69	56.65	56.73	56.38	56.25
26	58.52	58.31	58.17	57.98	57.67	57.57	57.21	56.68	56.63	56.72	56.37	56.26
27	58.51	58.29	58.16	57.97	57.64	57.56	57.19	56.66	56.60	56.69	56.37	56.29
28	58.49	58.37	58.12	57.97	57.62	57.55	57.16	56.65	56.57	56.66	56.36	56.29
29	58.47	58.38	58.14	57.96	---	57.52	57.15	56.64	56.55	56.63	56.34	56.27
30	58.47	58.36	58.13	57.93	---	57.46	57.14	56.61	56.60	56.61	56.31	56.25
31	58.46	---	58.12	57.94	---	57.43	---	56.59	---	56.59	56.30	---
MEAN	58.74	58.32	58.23	58.01	57.78	57.65	57.34	56.85	56.59	56.55	56.50	56.25
MAX	59.01	58.43	58.35	58.10	57.92	57.79	57.46	57.13	56.67	56.73	56.70	56.35
MIN	58.46	58.21	58.12	57.93	57.62	57.43	57.14	56.59	56.47	56.37	56.30	56.11

CAL YR 1988 MEAN 57.35 MAX 59.04 MIN 55.99
WTR YR 1989 MEAN 57.40 MAX 59.01 MIN 56.11

OKLAWAHA RIVER BASIN

02243958 LAKE OCKLAWAHA NEAR ORANGE SPRINGS, FL

LOCATION.--Lat 29°30'30", long 81°48'15", in NW¼ sec.28, T.11 S., R.25 E., Putnam County, Hydrologic Unit 030810102, at upstream side of control structure of Rodman Dam on Oklawaha River, 8.4 mi east of Orange Springs.

SURFACE AREA.--10,800 acres (16.9 mi^2), at elevation 20.0 ft above NGVD, from data provided by U.S. Army Corps of Engineers.

DRAINAGE AREA.--2,747 mi^2, includes Paynes Prairie, a diked sinkhole area of 650 mi^2, approximately, which is noncontributing except for pumpage.

PERIOD OF RECORD.--October 1968 to current year. Records for Oklawaha River above Rodman Dam, near Orange Springs (station 02243959). Prior to October 1969, published as Rodman Reservoir near Orange Springs.

REVISED RECORDS.--WDR FL-77-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (U.S. Army Corps of Engineers bench mark).

REMARKS.--Lake is formed by earthfill dam with concrete control structure. Dam was completed and storage began on Sept. 30, 1968. Capacity, 120,000 acre-ft between elevations 6.0 ft, invert of gate sills, and 23.2 ft, standard project flood; no dead storage below elevation 6.0 ft. Lake is part of the Cross-Florida Barge Canal and is used for recreation purposes. Figures given herein represent total contents.

COOPERATION.--Preliminary capacity table provided by U.S. Army Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 85,000 acre-ft, Feb. 4, 1970, elevation, 20.70 ft; minimum since July 1969, 15,000 acre-ft, Sept. 5, Nov. 10, 1972; minimum elevation, 12.57 ft, Nov. 10, 1972.

Preliminary capacity table
(elevation, in feet NGVD, and contents, in acre-feet)

10	5,000	14	22,000	18	53,000	22	102,000
11	9,000	15	28,000	19	64,000	23	117,000
12	13,000	16	35,000	20	76,000		
13	17,000	17	44,000	21	88,000		

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19.71	20.28	17.92	12.96	12.80	12.70	12.97	13.14	17.13	18.20	17.88	18.04
2	19.71	20.22	17.57	12.93	12.81	12.87	12.79	13.44	17.21	18.21	18.02	18.17
3	19.77	20.15	17.35	12.98	12.88	12.99	12.75	13.61	17.26	18.20	18.04	18.09
4	19.78	20.11	17.14	12.89	12.93	13.01	12.77	13.82	17.29	18.20	18.03	18.06
5	19.78	20.12	16.88	12.93	13.01	12.98	12.89	14.12	17.40	18.22	18.03	18.03
6	19.81	20.06	16.65	13.02	13.01	13.01	12.91	14.35	17.48	18.35	18.07	18.02
7	19.86	19.96	16.32	13.02	13.00	13.04	13.01	14.51	17.57	18.22	18.08	18.02
8	19.86	19.93	15.94	13.04	13.00	13.06	12.97	14.62	17.62	18.16	18.08	17.99
9	19.86	19.88	15.55	13.06	12.97	13.09	13.00	14.84	17.74	18.07	18.12	17.98
10	19.87	19.82	15.14	13.04	12.99	13.03	13.08	15.02	17.79	18.12	18.11	17.97
11	19.87	19.86	14.77	13.06	13.01	12.98	13.07	15.16	17.83	18.18	18.10	17.96
12	19.84	19.87	14.41	13.06	13.01	13.02	13.06	15.33	17.89	18.25	18.05	17.92
13	19.80	19.90	14.08	12.96	13.00	13.02	12.98	15.47	17.99	18.25	18.03	17.93
14	19.77	19.91	13.71	12.90	13.02	13.00	12.92	15.69	18.03	18.22	18.05	17.96
15	19.81	19.92	13.36	12.89	13.04	12.96	12.94	15.86	18.12	18.24	18.12	18.04
16	19.88	19.94	13.05	12.85	13.06	12.93	12.88	15.98	18.19	18.18	18.12	18.04
17	19.93	19.96	12.92	12.85	12.99	12.90	12.79	16.11	18.15	18.04	18.13	18.05
18	19.94	19.93	12.87	12.95	12.94	12.91	12.82	16.23	18.15	17.93	18.10	18.09
19	19.95	19.85	12.87	13.00	12.90	12.86	12.85	16.32	18.16	17.96	18.03	18.11
20	19.95	19.77	12.92	13.14	12.87	12.91	12.82	16.40	18.25	18.03	17.96	18.07
21	19.98	19.64	13.00	13.15	12.92	13.10	12.82	16.48	18.24	18.07	18.00	18.05
22	19.97	19.49	13.04	13.23	13.05	13.23	12.79	16.58	18.21	18.23	18.01	18.01
23	19.95	19.51	13.06	13.28	13.21	13.17	12.81	16.66	18.23	18.22	18.01	18.07
24	19.95	19.13	13.09	13.26	12.98	12.88	12.85	16.73	18.32	18.14	17.99	18.09
25	19.92	18.75	13.11	13.22	12.81	12.91	12.97	16.82	18.35	18.14	18.00	18.24
26	19.94	18.45	13.06	13.25	12.75	12.88	13.08	16.88	18.32	18.12	17.99	18.29
27	19.97	18.17	13.02	13.17	12.69	12.91	13.11	16.89	18.27	18.06	18.01	18.23
28	20.05	18.00	13.02	12.86	12.73	13.04	13.12	16.90	18.26	18.01	18.03	18.15
29	20.11	18.00	12.97	12.83	---	13.10	13.06	16.94	18.29	17.93	18.03	18.15
30	20.17	18.03	12.95	12.85	---	13.17	13.05	16.99	18.21	17.86	18.02	18.09
31	20.24	---	12.94	12.81	---	13.17	---	17.05	---	17.82	18.01	---
MEAN	19.90	19.55	14.34	13.01	12.94	12.99	12.93	15.64	17.93	18.12	18.04	18.06
MAX	20.24	20.28	17.92	13.28	13.21	13.23	13.12	17.05	18.35	18.35	18.13	18.29
MIN	19.71	18.00	12.87	12.81	12.69	12.70	12.75	13.14	17.13	17.82	17.88	17.92

CAL YR 1988 MEAN 18.19 MAX 20.28 MIN 12.87
WTR YR 1989 MEAN 16.14 MAX 20.28 MIN 12.69

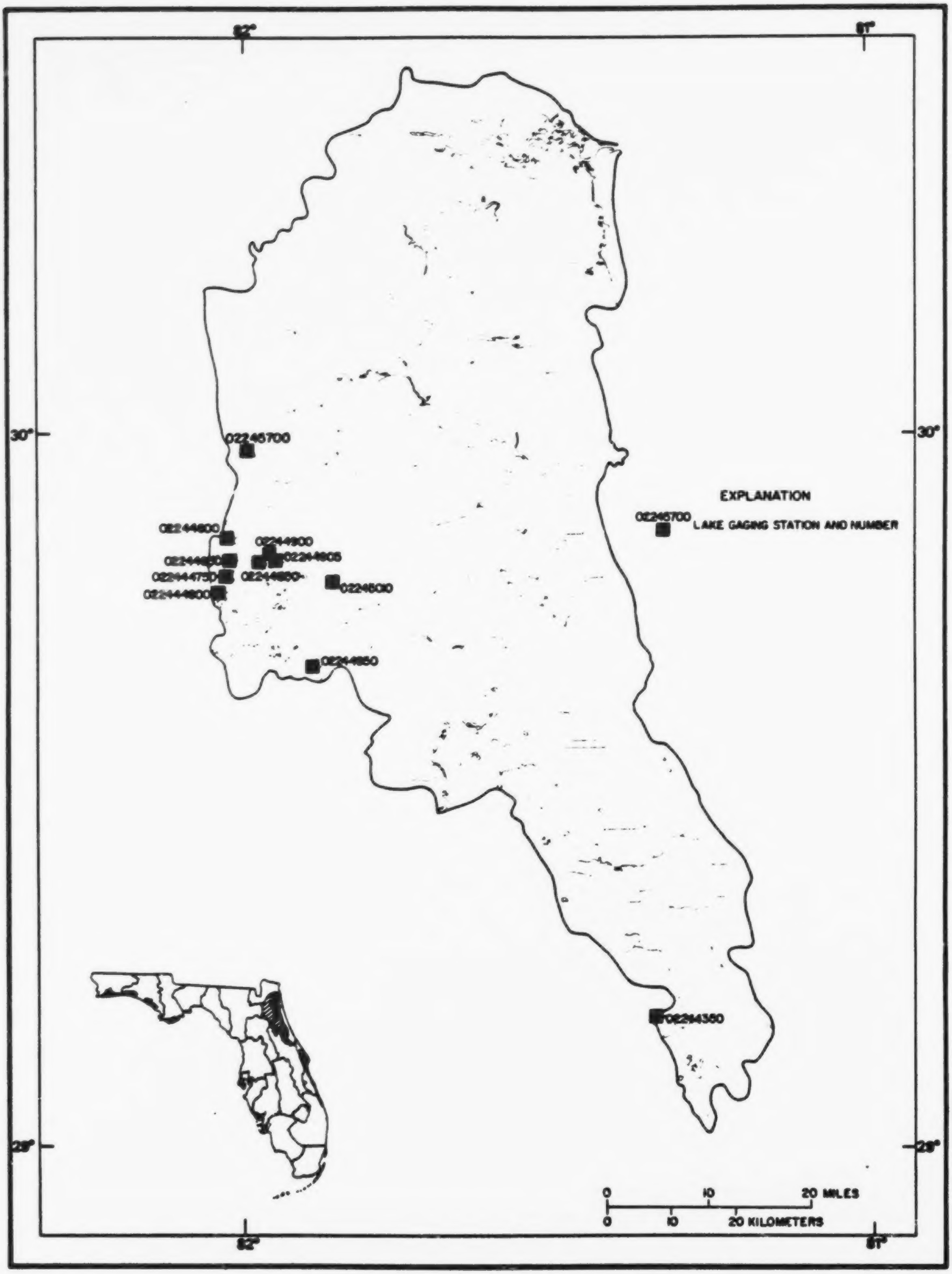

82°
81°
30°
30°
02245700
02244600
02244900
02244650
02244905
02244750
02244850
02244800
02245030
02244950
02244350
EXPLANATION
02245700 LAKE GAGING STATION AND NUMBER
29°
29°
0
10
20 MILES
0
10
20 KILOMETERS
82°
81°

Figure 26.--Location of lake gaging stations in the St. Johns River basin below the Oklawaha River.

ST. JOHNS RIVER

ST. JOHNS RIVER BASIN BELOW OKLAWAHA RIVER

02244350 LAKE WINONA NEAR DE LAND, FL

LOCATION.--Lat 29°10'50", long 81°20'06", in SE¼ sec.19, T.15 S., R.30 E., Volusia County, Hydrologic Unit 03080103, on northwest shore of lake, on pier at YMCA camp, 10.8 mi north of De Land.

SURFACE AREA.--156 acres (0.24 mi^2).

DRAINAGE AREA.--1.35 mi^2.

PERIOD OF RECORD.--March 1965 to current year.

REVISED RECORDS.--WDR FL-75-1: Surface area, drainage area.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.

REMARKS.--Lake is landlocked.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily elevation, 40.52 ft, Oct. 20, 1969; minimum daily, 31.72 ft, July 7, 1981.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	33.35	33.13	33.32	33.09	33.21	32.83	32.68	32.54	31.96	32.39	32.25	32.53
2	33.33	33.12	33.30	33.09	33.21	32.87	32.65	32.57	31.94	32.38	32.32	32.58
3	33.38	33.11	33.28	33.08	33.20	32.89	32.64	32.55	31.91	32.37	32.32	32.57
4	33.43	33.13	33.28	33.07	33.20	32.90	32.62	32.53	31.89	32.39	32.33	32.56
5	33.40	33.13	33.26	33.05	33.19	32.89	32.62	32.51	31.92	32.42	32.32	32.55
6	33.38	33.12	33.25	33.04	33.18	32.89	32.60	32.49	31.93	32.41	32.30	32.54
7	33.35	33.10	33.25	33.03	33.17	32.87	32.58	32.46	31.92	32.40	32.27	32.52
8	33.32	33.09	33.24	33.03	33.17	32.86	32.55	32.43	31.93	32.39	32.24	32.51
9	33.30	33.08	33.24	33.02	33.15	32.85	32.53	32.41	31.95	32.37	32.27	32.52
10	33.29	33.07	33.23	33.02	33.12	32.83	32.52	32.39	31.94	32.35	32.29	32.52
11	33.28	33.06	33.24	33.01	33.09	32.81	32.50	32.41	31.92	32.33	32.28	32.51
12	33.26	33.05	33.27	33.01	33.07	32.80	32.47	32.39	31.93	32.32	32.27	32.49
13	33.24	33.04	33.26	33.00	33.06	32.79	32.46	32.37	31.91	32.33	32.30	32.47
14	33.22	33.03	33.24	33.00	33.05	32.78	32.44	32.35	31.89	32.31	32.36	32.45
15	33.20	33.02	33.23	32.99	33.04	32.77	32.46	32.33	31.86	32.29	32.47	32.43
16	33.18	33.01	33.23	32.99	33.04	32.76	32.46	32.31	31.85	32.27	32.46	32.42
17	33.17	33.00	33.22	32.98	33.03	32.75	32.45	32.29	31.89	32.25	32.45	32.41
18	33.16	32.99	33.19	32.96	33.01	32.74	32.44	32.27	31.88	32.24	32.45	32.41
19	33.15	32.98	33.15	32.95	33.01	32.73	32.43	32.24	31.91	32.25	32.46	32.40
20	33.14	32.97	33.13	32.94	33.00	32.72	32.44	32.22	31.96	32.23	32.48	32.38
21	33.13	32.96	33.13	32.97	32.99	32.71	32.56	32.20	31.96	32.23	32.55	32.35
22	33.12	33.00	33.13	33.16	33.01	32.70	32.55	32.18	32.03	32.22	32.58	32.34
23	33.10	33.34	33.13	33.26	33.00	32.71	32.54	32.16	32.10	32.20	32.59	32.35
24	33.09	33.36	33.13	33.25	32.94	32.74	32.53	32.14	32.11	32.18	32.58	32.36
25	33.07	33.35	33.12	33.25	32.89	32.73	32.51	32.12	32.10	32.16	32.57	32.40
26	33.06	33.34	33.12	33.24	32.85	32.72	32.49	32.10	32.09	32.14	32.57	32.44
27	33.04	33.34	33.11	33.24	32.83	32.72	32.47	32.08	32.07	32.11	32.59	32.48
28	33.04	33.35	33.11	33.24	32.82	32.71	32.45	32.05	32.05	32.09	32.58	32.49
29	33.02	33.33	33.10	33.23	---	32.69	32.43	32.03	32.16	32.08	32.57	32.50
30	33.02	33.32	33.10	33.22	---	32.68	32.44	32.01	32.39	32.11	32.55	32.49
31	33.06	---	33.10	33.22	---	32.69	---	31.99	---	32.26	32.54	---
MEAN	33.20	33.13	33.20	33.08	33.05	32.78	32.52	32.29	31.98	32.27	32.42	32.47
MAX	33.43	33.36	33.32	33.26	33.21	32.90	32.68	32.57	32.39	32.42	32.59	32.58
MIN	33.02	32.96	33.10	32.94	32.82	32.68	32.43	31.99	31.85	32.08	32.24	32.34

CAL YR 1988 MEAN 33.51 MAX 34.32 MIN 32.92
WTR YR 1989 MEAN 32.70 MAX 33.43 MIN 31.85

ST. JOHNS RIVER BASIN BELOW OKLAWAHA RIVER

02244600 SAND HILL LAKE NEAR KEYSTONE HEIGHTS, FL

LOCATION.--Lat 29°51'01", long 82°01'10", in NE¼ sec.32, T.7 S., R.23 E., Clay County, Hydrologic Unit 03080103, on west shore of lake, at end of graded road, 1.3 mi east of Keystone Airport, and 3.5 mi north of Keystone Heights.

SURFACE AREA.--1,250 acres (1.95 mi^2).

DRAINAGE AREA.--11.0 mi^2.

PERIOD OF RECORD.--July 1957 to July 1959 (twice weekly); August 1959 to September 1960 (weekly); October 1960 to September 1965 (fragmentary); October 1965 to February 1976 (weekly); March 1976 to current year (monthly). Records of elevations prior to October 1960 are unpublished and available in files of the Jacksonville Field Headquarters.

GAGE.--Nonrecording gage. Datum of gage is 126.02 ft above National Geodetic Vertical Datum of 1929; gage readings have been reduced to elevations above NGVD.

REMARKS.--Lake is one of the Etonia Creek headwaters chain of lakes.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation observed, 132.73 ft, Sept. 22, 1964; minimum observed, 130.74 ft, May 26, 1968.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	ELEVATION ABOVE NGVD (FEET)	DATE	TIME	ELEVATION ABOVE NGVD (FEET)
OCT			APR		
03...	0900	132.12	03...	1530	131.44
07...	1530	132.02	MAY		
NOV			02...	0830	131.40
01...	0930	131.74	JUN		
DEC			01...	1500	131.20
01...	1530	131.90	06...	1610	131.08
08...	1010	131.80	JUL		
JAN			03...	1030	131.04
03...	0930	131.78	AUG		
FEB			07...	0830	131.06
01...	1500	131.76	SEP		
09...	1040	131.64	01...	1530	131.04
MAR					
03...	1000	131.62			

ST. JOHNS RIVER BASIN BELOW OKLAWAHA RIVER

02244650 MAGNOLIA LAKE NEAR KEYSTONE HEIGHTS, FL

LOCATION.--Lat 29°49'12", long 82°00'55", in NE¼ sec.8, T.8 S., R.23 E., Clay County, Hydrologic Unit 03080103, on southeast shore of lake, at east side of pier at Magnolia Lake State Park, 2.5 mi north of Keystone Heights.

SURFACE AREA.--201 acres (0.31 mi^2).

DRAINAGE AREA.--14.4 mi^2.

PERIOD OF RECORD.--March 1958 to April 1960 (fragmentary); May 1960 to September 1966 (once daily); October 1966 to June 1968 (about thrice weekly); July 1968 to March 1969 (fragmentary); April 1969 to July 1978 (once-daily); August 1978 to current year (weekly). Records of elevations prior to October 1960 are unpublished and available in files of the Jacksonville Field Headquarters.

GAGE.--Nonrecording gage. Datum of gage is 117.00 ft above National Geodetic Vertical Datum of 1929; gage readings have been reduced to elevations above NGVD.

REMARKS.--Lake is one of the Etonia Creek headwaters chain of lakes. Temporary earthen dam at lake outlet from Sept. 9-12, 1973.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation observed, 125.91 ft, Sept. 12, 1973, caused by temporary earthen dam at lake outlet; minimum observed, 122.30 ft, Nov. 22, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum elevation observed, 125.46 ft, Oct. 1; minimum observed, 122.40 ft, Sept. 2.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
INSTANT VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	125.46	---	---	---	---	---	124.34	---	123.50	123.40	---	---
2	---	---	---	---	---	---	---	---	---	---	---	122.40
3	---	---	124.90	---	---	---	---	---	---	---	123.30	---
4	---	---	---	---	124.70	124.62	---	---	---	---	---	---
5	---	124.82	---	---	---	---	---	---	---	---	123.24	---
6	---	---	---	---	---	---	---	123.90	123.52	---	---	---
7	125.15	---	---	124.74	---	---	124.30	---	---	---	---	---
8	125.06	---	124.85	---	---	---	124.28	---	---	123.34	---	---
9	---	---	---	---	124.67	---	---	---	---	---	---	122.54
10	---	---	124.86	---	---	---	---	---	123.48	---	---	---
11	---	---	---	---	124.64	124.52	---	---	---	---	---	---
12	---	124.82	---	---	---	---	---	---	---	---	123.14	---
13	---	---	---	---	---	---	---	123.82	---	---	---	---
14	---	---	---	124.72	---	---	---	---	---	---	---	---
15	124.88	---	---	---	---	---	124.20	---	---	123.40	---	---
16	---	---	---	---	---	---	---	---	---	---	---	122.86
17	---	---	---	---	---	---	---	---	123.34	---	---	---
18	---	---	---	---	124.54	124.46	---	---	---	---	---	---
19	---	124.84	---	---	---	---	---	---	---	---	123.14	---
20	---	---	---	---	---	---	---	123.72	---	---	---	---
21	---	---	---	124.70	---	---	---	---	---	---	---	---
22	124.78	---	---	---	---	---	124.14	---	---	123.38	---	---
23	---	---	---	---	---	---	---	---	---	---	---	122.44
24	---	---	124.80	---	---	---	---	---	123.34	---	---	---
25	---	---	---	---	124.52	124.42	---	---	---	---	---	---
26	---	124.86	---	---	---	---	---	---	---	---	123.00	---
27	---	---	---	---	---	---	---	123.62	---	---	---	---
28	---	---	---	124.70	---	---	---	---	---	---	---	---
29	124.74	---	---	---	---	---	123.98	---	---	123.26	---	122.80
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	124.78	---	---	---	---	---	---	---	---	---

ST. JOHNS RIVER BASIN BELOW OKLAWAHA RIVER

02244750 BROOKLYN LAKE AT KEYSTONE HEIGHTS, FL

LOCATION.--Lat 29°47'46", long 82°01'21", in SW¼ sec.17, T.8 S., R.23 E., Clay County, Hydrologic Unit 03080103, near middle of span on east side of bridge on State Highway 21 across east bay of lake, 0.9 mi northeast of Keystone Heights.

SURFACE AREA.--635 acres (0.99 mi^2).

DRAINAGE AREA.--17.4 mi^2.

PERIOD OF RECORD.--July 1957 to September 1959 (once-daily); October 1959 to September 1960 (thrice weekly); October 1960 to March 1961 (weekly); April 1961 to July 1965 (fragmentary); August 1965 to current year (weekly). Records of elevations prior to October 1960 are unpublished and are available in files of the Jacksonville Field Headquarters.

GAGE.--Nonrecording gage. Datum of gage is 93.06 ft above National Geodetic Vertical Datum of 1929; gage readings have been reduced to elevations above NGVD.

REMARKS.--Lake is one of the Etonia Creek headwaters chain of lakes.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation observed, 117.43 ft, Oct. 1, 1960; minimum observed, 97.23 ft, Feb. 24,25, 1958.

EXTREMES OUTSIDE PERIOD OF RECORD.--An elevation of 118.2 ft was reached in 1948, from information by local resident.

EXTREMES FOR CURRENT YEAR.--Maximum elevation observed, 107.48 ft, Oct. 3; minimum observed, 101.71 ft, Sept. 14.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
INSTANT VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	103.18	---	---	---
2	---	---	---	---	106.16	105.66	---	---	---	---	---	---
3	107.48	---	---	---	---	---	---	---	---	---	102.59	---
4	---	---	---	---	---	---	---	104.06	---	---	---	---
5	---	---	106.90	---	---	---	---	---	---	---	---	---
6	---	---	---	106.58	---	---	---	---	103.15	102.96	---	---
7	107.46	107.04	---	---	---	---	104.84	---	---	---	---	101.93
8	---	---	106.86	---	---	---	---	---	103.06	---	---	---
9	---	---	---	---	106.02	105.51	---	---	---	---	---	---
10	107.40	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	103.81	---	---	---	---
12	---	---	106.91	106.46	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	102.96	---	---
14	---	106.95	---	---	---	---	104.58	---	---	---	---	101.71
15	---	---	---	---	---	---	---	---	102.91	---	---	---
16	---	---	---	---	106.18	105.34	---	---	---	---	---	---
17	107.28	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	103.59	---	---	---	---
19	---	---	106.82	106.29	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	104.43	---	---	102.79	---	---
21	---	106.91	---	---	---	---	---	---	---	---	---	101.74
22	---	---	---	---	---	---	---	---	102.91	---	---	---
23	---	---	---	---	105.61	105.17	---	---	---	---	---	---
24	107.21	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	103.41	---	---	---	---
26	---	---	106.74	106.32	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	104.24	---	---	102.68	---	101.72
28	---	107.02	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	102.70	---	---	---
30	---	---	---	---	---	105.02	---	---	---	---	---	---
31	107.11	---	---	---	---	---	---	---	---	---	101.86	---

ST. JOHNS RIVER BASIN BELOW OKLAWAHA RIVER

02244800 LAKE GENEVA AT KEYSTONE HEIGHTS, FL

LOCATION.--Lat 29°46'26", long 82°01'59", in NE¼ sec.30, T.8 S., R.23 E., Clay County, Hydrologic Unit 03080103, on northwest shore of lake, on private beach, 0.8 mi south of Keystone Heights.

SURFACE AREA.--1,746 acres (2.73 mi^2).

DRAINAGE AREA.--35.5 mi^2.

PERIOD OF RECORD.--July 1957 to January 1961 (once-daily); February 1961 to July 1965 (fragmentary); August 1965 to current year (weekly), incomplete. Records of elevations prior to October 1960 are unpublished and available in files of the Jacksonville Field Headquarters.

GAGE.--Nonrecording gage. Datum of gage is 94.91 ft above National Geodetic Vertical Datum of 1929; gage readings have been reduced to elevations above NGVD.

REMARKS.--Lake is one of the Etonia Creek headwaters chain of lakes.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation observed, 107.23 ft, July 15, 1973; minimum observed, 96.29 ft, Sept. 13, 1989.

EXTREMES OUTSIDE PERIOD OF RECORD.--An elevation of 109.1 ft was reached in 1948, from information by local resident.

EXTREMES FOR CURRENT YEAR.--Maximum elevation observed, 98.73 ft, Oct. 5; minimum observed, 96.29 ft, Sept. 13.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
INSTANT VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	98.09	97.81	---	---	---	---	---	---
2	---	98.33	---	---	---	---	---	---	---	---	96.63	---
3	---	---	---	---	---	---	---	---	---	---	96.62	---
4	---	---	---	98.21	---	---	---	97.31	---	---	---	---
5	98.73	---	---	---	---	---	---	---	---	96.85	---	---
6	---	---	---	---	---	---	---	---	96.86	---	---	96.35
7	98.68	---	---	---	---	---	97.63	---	---	---	---	---
8	---	---	98.24	---	98.05	97.91	---	---	---	---	---	---
9	---	98.31	---	---	98.01	---	---	---	---	---	96.47	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	98.15	---	---	---	97.13	---	---	---	---
12	98.61	---	---	---	---	---	---	---	---	96.77	---	---
13	---	---	---	---	---	---	---	---	---	---	---	96.29
14	---	---	98.29	---	---	---	---	---	96.77	---	---	---
15	---	---	---	---	97.91	97.85	---	---	---	---	---	---
16	---	98.21	---	---	---	---	---	---	---	---	96.43	---
17	---	---	---	---	---	---	---	97.01	---	---	---	---
18	---	---	---	98.11	---	---	---	---	---	---	---	---
19	98.49	---	---	---	---	---	---	---	---	96.75	---	---
20	---	---	---	---	---	---	---	---	---	---	---	96.39
21	---	---	98.27	---	---	---	---	---	96.79	---	---	---
22	---	---	---	---	97.97	97.81	---	---	---	---	---	---
23	---	98.37	---	---	---	---	---	---	---	---	96.35	---
24	---	---	---	---	---	---	---	96.97	---	---	---	---
25	---	---	---	98.11	---	---	---	---	---	---	---	---
26	98.41	---	---	---	---	---	---	---	---	96.77	---	---
27	---	---	---	---	---	---	---	---	---	---	---	96.45
28	---	---	98.25	---	---	---	---	---	96.71	---	---	---
29	---	---	---	---	---	97.77	---	---	---	---	---	---
30	---	98.31	---	---	---	---	---	---	---	---	96.35	---
31	---	---	---	---	---	---	---	96.81	---	---	---	---

ST. JOHNS RIVER BASIN BELOW OKLAWAHA RIVER

02244850 PEBBLE LAKE NEAR KEYSTONE HEIGHTS, FL

LOCATION.--Lat 29°49'31", long 81°57'10", in SE¼ sec.1, T.8 S., R.23 E., Clay County, Hydrologic Unit 03080103, on east shore of lake in Gold Head Branch State Park, 5.5 mi northeast of Keystone Heights.

SURFACE AREA.--9.5 acres (0.01 mi^2).

DRAINAGE AREA.--0.19 mi^2.

PERIOD OF RECORD.--July 1945 to current year (weekly), incomplete. Records of elevations prior to October 1960 are unpublished and available in files of the Jacksonville Field Headquarters.

GAGE.--Nonrecording gage. Datum of gage is 101.16 ft above National Geodetic Vertical Datum of 1929; gage readings have been reduced to elevations above NGVD.

REMARKS.--Lake has no surface outlet.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation observed, 116.36 ft, July 11, 1948, may have been higher in October 1948; minimum observed, 84.24 ft, Apr. 28, 1957.

EXTREMES FOR CURRENT YEAR.--Maximum elevation observed, 100.04 ft, Dec. 14; minimum observed, 94.02 ft, Sept. 19.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
INSTANT VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	99.20	---	---	---	---	---	---	---	---	94.90	---
2	---	---	---	---	---	---	---	97.40	---	---	---	---
3	---	---	---	100.00	---	---	---	---	---	---	94.93	---
4	---	---	---	---	---	---	98.19	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	94.24
6	---	---	99.94	---	---	---	---	---	96.14	---	---	---
7	98.08	---	---	---	99.54	98.98	98.12	---	96.12	---	---	---
8	---	99.34	99.94	---	---	---	---	---	---	---	94.72	---
9	---	---	---	---	99.47	---	---	97.06	---	---	---	---
10	---	---	---	99.92	---	---	---	---	---	---	---	---
11	98.28	---	---	---	---	---	98.00	---	---	95.36	---	---
12	---	---	---	---	---	---	---	---	---	---	---	94.08
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	100.04	---	99.34	98.80	---	---	95.86	---	---	---
15	---	---	---	---	---	---	---	---	---	---	94.72	---
16	---	99.50	---	---	---	---	---	96.92	---	---	---	---
17	---	---	---	99.82	---	---	---	---	---	---	---	---
18	98.60	---	---	---	---	---	97.84	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	94.02
20	---	---	100.02	---	---	---	---	---	---	---	---	---
21	---	---	---	---	99.18	98.54	---	---	---	---	---	---
22	---	99.62	---	---	---	---	---	---	95.68	---	94.56	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	99.80	---	---	---	---	---	---	---	---
25	98.86	---	---	---	---	---	97.75	---	---	95.06	---	---
26	---	---	---	---	---	---	---	---	---	---	---	94.04
27	---	---	100.02	---	---	---	---	---	---	---	---	---
28	---	---	---	---	99.02	98.44	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	99.94	---	---	---	---	---	96.38	95.46	---	94.32	---
31	---	---	---	99.70	---	---	---	---	---	---	---	---

ST. JOHNS RIVER BASIN BELOW OKLAWAHA RIVER

02244900 LAKE JOHNSON (LITTLE LAKE) NEAR KEYSTONE HEIGHTS, FL

LOCATION.--Lat 29°49'31", long 81°57'07", in SE¼ sec.1, T.8 S., R.23 E., Clay County, Hydrologic Unit 03080103, on north shore of little lake on northwest side of Lake Johnson in Gold Head Branch State Park, 5.5 mi northeast of Keystone Heights.

SURFACE AREA.--34.6 acres (0.05 mi^2), little lake area. Combined areas of little lake and big lake are 475 acres, (0.74 mi^2).

DRAINAGE AREA.--6.37 mi^2, combined areas.

PERIOD OF RECORD.--July 1945 to current year (weekly), incomplete. Records of elevations prior to Oct. 1960 are unpublished and available in files of the Jacksonville Field Headquarters.

GAGE.--Nonrecording gage. Datum of gage is 89.00 ft above National Geodetic Vertical Datum of 1929; gage readings have been reduced to elevations above NGVD. Prior to Jan. 4, 1963, at site 200 ft south at datum 5.61 ft higher. Jan. 4, 1963 to Dec. 1977 at site 200 ft south at present datum. Since Feb. 7, 1959, auxiliary non-recording gage in big lake east of earthen dam.

REMARKS.--Gold Head Branch flows into little lake; little lake was first separated from big lake below an elevation of about 95 ft by a shallow channel and earthen dam, which was constructed June 30, 1957; the channel was deepened and a control with removable boards was constructed during August 1968. On January 17, 1969, the dam was found partially washed out and a new dam was constructed in April 1969; the top of the new dam is at an elevation of about 96 ft. Lake Johnson has no surface outlet.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation observed, about 105 ft in October 1948, from information by local resident; minimum observed, 90.87 ft, Aug. 12, 1975.

EXTREMES FOR CURRENT YEAR.--Maximum elevation observed, 95.86 ft, Oct. 4; minimum observed, 94.67 ft, May 9.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
INSTANT VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	95.43	---	---	---	---	---	---	---	---	95.01	---
2	---	---	---	---	---	---	---	95.13	---	---	---	---
3	---	---	---	95.35	---	---	---	---	---	---	95.07	---
4	95.86	---	---	---	---	---	95.15	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	95.15
6	---	---	95.41	---	---	---	---	---	95.13	---	---	---
7	95.48	---	---	---	95.25	95.21	95.15	---	95.09	---	---	---
8	---	95.47	95.41	---	---	---	---	---	---	---	94.89	---
9	---	---	---	---	95.21	---	---	94.67	---	---	---	---
10	---	---	---	95.29	---	---	---	---	---	---	---	---
11	95.49	---	---	---	---	---	95.13	---	---	95.05	---	---
12	---	---	---	---	---	---	---	---	---	---	---	95.09
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	95.41	---	95.23	95.19	---	---	95.07	---	---	---
15	---	---	---	---	---	---	---	---	---	---	95.11	---
16	---	95.41	---	---	---	---	---	95.11	---	---	---	---
17	---	---	---	95.29	---	---	---	---	---	---	---	---
18	95.49	---	---	---	---	---	95.13	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	95.15
20	---	---	95.39	---	---	---	---	---	---	---	---	---
21	---	---	---	---	95.21	95.17	---	---	---	---	---	---
22	---	95.45	---	---	---	---	---	---	95.11	---	95.11	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	95.30	---	---	---	---	---	---	---	---
25	95.47	---	---	---	---	---	95.11	---	---	95.01	---	---
26	---	---	---	---	---	---	---	---	---	---	---	95.19
27	---	---	95.37	---	---	---	---	---	---	---	---	---
28	---	---	---	---	95.21	95.17	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	95.45	---	---	---	---	---	95.19	94.97	---	95.07	---
31	---	---	---	95.25	---	---	---	---	---	---	---	---

ST. JOHNS RIVER BASIN BELOW OKLAWAHA RIVER

02244905 LAKE JOHNSON (BIG LAKE) NEAR KEYSTONE HEIGHTS, FL

LOCATION.--Lat 29°49"26", long 81°56'42", in SW¼ sec.6, T.8 S., R.24 E., Clay County, Hydrologic Unit 03080103, on northwest shore of big lake in Gold Head Branch State Park, 5.8 mi northeast of Keystone Heights.

SURFACE AREA.--441 acres (0.69 mi^2), big lake area. Combined areas of big lake and little lake are 475 acres (0.74 mi^2).

DRAINAGE AREA.--6.37 mi^2, combined areas.

PERIOD OF RECORD.--February 1959 to June 1960 (fragmentary); January 1963 to current year (weekly), incomplete. Records of elevations prior to January 1963 are unpublished and available in files of the Jacksonville Field Headquarters.

GAGE.--Nonrecording gage. Datum of gage is 89.00 ft above National Geodetic Vertical Datum of 1929; gage readings have been reduced to elevations above NGVD. Prior to Jan. 7, 1963, at same site at datum 2.40 ft lower.

REMARKS.--Gold Head Branch flows into little lake; little lake was first separated from big lake below an elevation of about 95 ft by a shallow channel and earthen dam, which was constructed June 30, 1957; the channel was deepened and a control with removable boards was constructed during August 1968. On January 17, 1969, the dam was found partially washed out and a new dam was constructed in April 1969; the top of the new dam is at an elevation of about 96 ft. Lake Johnson has no surface outlet.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation observed, 98.30 ft, Mar. 4, 1966; minimum observed, 87.48 ft, Nov. 20, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum elevation observed, 90.71 ft, Nov. 30, Dec. 14; minimum observed, 87.75 ft, Sept. 12.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
INSTANT VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	90.49	---	---	---	---	---	---	---	---	88.01	---
2	---	---	---	---	---	---	---	89.29	---	---	---	---
3	---	---	---	90.59	---	---	---	---	---	---	88.03	---
4	90.69	---	---	---	---	---	89.81	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	87.89
6	---	---	90.67	---	---	---	---	---	88.48	---	---	---
7	90.65	---	---	---	90.39	90.25	89.79	---	88.47	---	---	---
8	---	90.55	90.66	---	---	---	---	---	---	---	87.87	---
9	---	---	---	---	90.36	---	---	89.05	---	---	---	---
10	---	---	---	90.51	---	---	---	---	---	---	---	---
11	90.61	---	---	---	---	---	89.69	---	---	88.23	---	---
12	---	---	---	---	---	---	---	---	---	---	---	87.75
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	90.71	---	90.27	90.13	---	---	88.49	---	---	---
15	---	---	---	---	---	---	---	---	---	---	87.93	---
16	---	90.49	---	---	---	---	---	88.99	---	---	---	---
17	---	---	---	90.45	---	---	---	---	---	---	---	---
18	90.57	---	---	---	---	---	89.69	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	87.81
20	---	---	90.67	---	---	---	---	---	---	---	---	---
21	---	---	---	---	90.19	90.01	---	---	---	---	---	---
22	---	90.59	---	---	---	---	---	---	88.37	---	87.95	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	90.49	---	---	---	---	---	---	---	---
25	90.51	---	---	---	---	---	89.49	---	---	88.25	---	---
26	---	---	---	---	---	---	---	---	---	---	---	87.91
27	---	---	90.63	---	---	---	---	---	---	---	---	---
28	---	---	---	---	90.17	89.99	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	90.71	---	---	---	---	---	88.59	88.29	---	87.85	---
31	---	---	---	90.45	---	---	---	---	---	---	---	---

ST. JOHNS RIVER BASIN BELOW OKLAWAHA RIVER

02244950 LAKE GRANDIN NEAR INTERLACHEN, FL

LOCATION.--Lat 29°40'16", long 81°52'55", in NE¼ sec.34, T.9 S., R.24 E., Putnam County, Hydrologic Unit 03080103, on south shore of lake, on private pier, 2.8 mi north of Interlachen.

SURFACE AREA.--354 acres (0.55 mi^2).

DRAINAGE AREA.--3.71 mi^2.

PERIOD OF RECORD.--July 1957 to September 1960 (once-daily), incomplete; October 1960 to current year (fragmentary). Records of elevations prior to October 1960 are unpublished and are available in files of the Jacksonville Field Headquarters.

GAGE.--Nonrecording gage. Datum of gage is 73.69 ft above National Geodetic Vertical Datum of 1929; gage readings have been reduced to elevations above NGVD.

REMARKS.--Lake outlet is through a swampy area and canal northward to Etonia Creek.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation observed, 83.33 ft, on or about Sept. 13, 1964, from floodmark; minimum observed, 79.81 ft, about July 31, 1961.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	ELEVATION ABOVE NGVD (FEET)	DATE	TIME	ELEVATION ABOVE NGVD (FEET)
OCT 07...	1650	81.59	APR 05...	1455	80.96
DEC 06...	1435	81.48	JUN 07...	1635	80.19
FEB 09...	0855	81.19	AUG 01...	1455	80.14

ST. JOHNS RIVER BASIN BELOW OKLAWAHA RIVER

02245010 GEORGES LAKE NEAR FLORAHOME, FL

LOCATION.--Lat 29°47'24", long 81°51'34", in NW¼ sec.24, T.8 S., R.24 E., Putnam County, Hydrologic Unit 03080103, on west side of lake, on south side of stub canal, at Lakeside Hills Fish Camp, 4.3 mi northeast of Florahome.

SURFACE AREA.--812 acres (1.27 mi^2).

DRAINAGE AREA.--5.33 mi^2.

PERIOD OF RECORD.--December 1982 to current year (weekly).

GAGE.--Nonrecording gage. Datum of gage is 85.51 ft above National Geodetic Vertical Datum of 1929; gage readings have been reduced to elevations above NGVD.

REMARKS.--Lake is headwaters of Falling Branch.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation observed, 99.41 ft, Sept. 13,20, 1988; minimum observed, 96.76 ft, Oct. 27, 1988.

EXTREMES FOR CURRENT YEAR.--Maximum elevation observed, 99.17 ft, Oct. 4; minimum observed, 97.21 ft, June 20.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
INSTANT VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	97.27	---
2	---	---	---	98.29	---	98.01	---	97.69	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	99.17	---	---	---	---	---	---	---	---	97.37	---	---
5	---	---	---	---	---	---	97.78	---	---	---	---	97.65
6	---	---	98.35	---	---	---	---	---	97.29	---	---	---
7	98.95	98.31	98.33	---	98.13	98.11	---	---	97.31	---	---	---
8	---	98.29	---	---	---	---	---	---	---	---	97.27	---
9	---	---	---	98.21	98.10	---	---	97.91	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	99.09	---	---	---	---	---	97.63	---	---	97.27	---	---
12	---	---	---	---	---	---	---	---	---	---	---	97.71
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	98.37	---	98.01	98.01	---	---	97.23	---	---	---
15	---	98.21	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	97.47	---	---	97.37	---
17	---	---	---	98.13	---	---	---	---	---	---	---	---
18	98.57	---	---	---	---	---	97.65	---	---	97.27	---	---
19	---	---	---	---	---	---	---	---	---	---	---	97.99
20	---	---	---	---	---	---	---	---	97.21	---	---	---
21	---	---	98.33	---	97.93	97.93	---	---	---	---	---	---
22	---	98.23	---	---	---	---	---	---	---	---	97.39	---
23	---	---	---	---	---	---	---	97.51	---	---	---	---
24	---	---	---	98.21	---	---	---	---	---	---	---	---
25	98.39	---	---	---	---	---	---	---	---	97.37	---	---
26	---	---	---	---	---	---	---	---	---	---	---	98.09
27	---	---	98.31	---	---	---	---	---	97.37	---	---	---
28	---	---	---	---	---	97.89	---	---	---	---	---	---
29	---	98.43	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	97.51	---	---	---	---
31	---	---	---	98.19	---	---	---	---	---	---	---	---

ST. JOHNS RIVER

ST. JOHNS RIVER BASIN BELOW OKLAWAHA RIVER

02245700 KINGSLEY LAKE AT CAMP BLANDING, FL

LOCATION.--Lat 29°58'28", long 81°59'22", in SE¼ sec.15, T.6 S., R.23 E., Clay County, Hydrologic Unit 03080103, on northeast shore of lake, on public pier, at Camp Blanding.

SURFACE AREA.--1,627 acres (2.54 mi^2).

DRAINAGE AREA.--6.84 mi^2.

PERIOD OF RECORD.--June 1945 to March 1946, October 1946 (monthly), March 1947 to current year (twice weekly), incomplete. Records of elevations prior to October 1960 are unpublished and are available in files of the Jacksonville Field Headquarters.

GAGE.--Nonrecording gage. Datum of gage is 173.22 ft above National Geodetic Vertical Datum of 1929 (U.S. Army Corps of Engineers bench mark); gage readings have been reduced to elevations above NGVD. Prior to Aug. 3, 1961, gage located at site approximately 1,000 ft southeast of present location at same datum.

REMARKS.--Outlet of lake has a fixed concrete (broken) weir with average crest elevation of about 176 ft; flow is into North Fork Black Creek.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation observed, 177.82 ft, Oct. 21, 1950, Sept. 12, 1964; minimum observed, 174.34 ft, Apr. 23, 1956.

EXTREMES FOR CURRENT YEAR.--Maximum elevation observed, 176.72 ft, Sept. 9; minimum observed, 175.38 ft, June 10,17.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
INSTANT VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	176.60	176.08	---	---	---	---	175.76	---	---	175.74	176.18	---
2	---	---	---	---	---	---	---	175.62	---	---	---	176.58
3	---	---	176.08	175.94	---	---	---	---	175.44	---	176.16	---
4	176.56	---	---	---	175.86	175.82	175.72	---	---	175.82	---	---
5	---	176.06	---	---	---	---	---	---	---	---	176.16	176.68
6	---	---	176.06	---	---	---	---	175.60	175.40	---	---	---
7	176.47	---	---	175.92	175.84	175.84	175.72	---	---	---	---	---
8	176.50	176.04	176.02	---	---	---	175.70	---	---	175.82	176.12	---
9	---	---	---	---	175.85	---	---	175.58	---	---	---	176.72
10	---	---	176.02	175.90	---	---	---	---	175.38	---	---	---
11	176.38	---	---	---	175.82	175.78	175.68	---	---	175.90	---	---
12	---	176.02	---	---	---	---	---	---	---	---	176.18	176.62
13	---	---	176.02	---	---	---	---	175.54	175.40	---	---	---
14	---	---	---	175.90	175.80	175.76	---	---	---	---	---	---
15	176.26	176.00	---	---	---	---	175.66	---	---	175.98	176.26	---
16	---	---	---	---	---	---	---	175.50	---	---	---	176.68
17	---	---	176.02	175.88	---	---	---	---	175.38	---	---	---
18	176.22	---	---	---	175.78	175.74	175.70	---	---	176.00	---	---
19	---	176.04	---	---	---	---	---	---	---	---	176.22	176.62
20	---	---	175.98	---	---	---	---	175.46	175.60	---	---	---
21	---	---	---	175.88	175.76	175.74	---	---	---	---	---	---
22	176.18	176.06	---	---	---	---	175.70	---	---	176.02	176.42	---
23	---	---	---	---	---	---	---	175.54	---	---	---	176.56
24	---	---	175.96	175.92	175.76	---	---	---	175.62	---	---	---
25	176.14	---	---	---	---	175.76	175.68	---	---	176.22	---	---
26	---	176.14	---	---	---	---	---	---	---	---	176.44	176.56
27	---	---	175.94	---	---	---	---	175.52	175.78	---	---	---
28	---	---	---	175.90	175.74	175.74	---	---	---	---	---	---
29	176.10	176.10	---	---	---	---	175.66	---	---	176.20	176.46	---
30	---	---	---	---	---	---	---	175.46	---	---	---	176.58
31	---	---	175.94	175.88	---	---	---	---	---	---	---	---

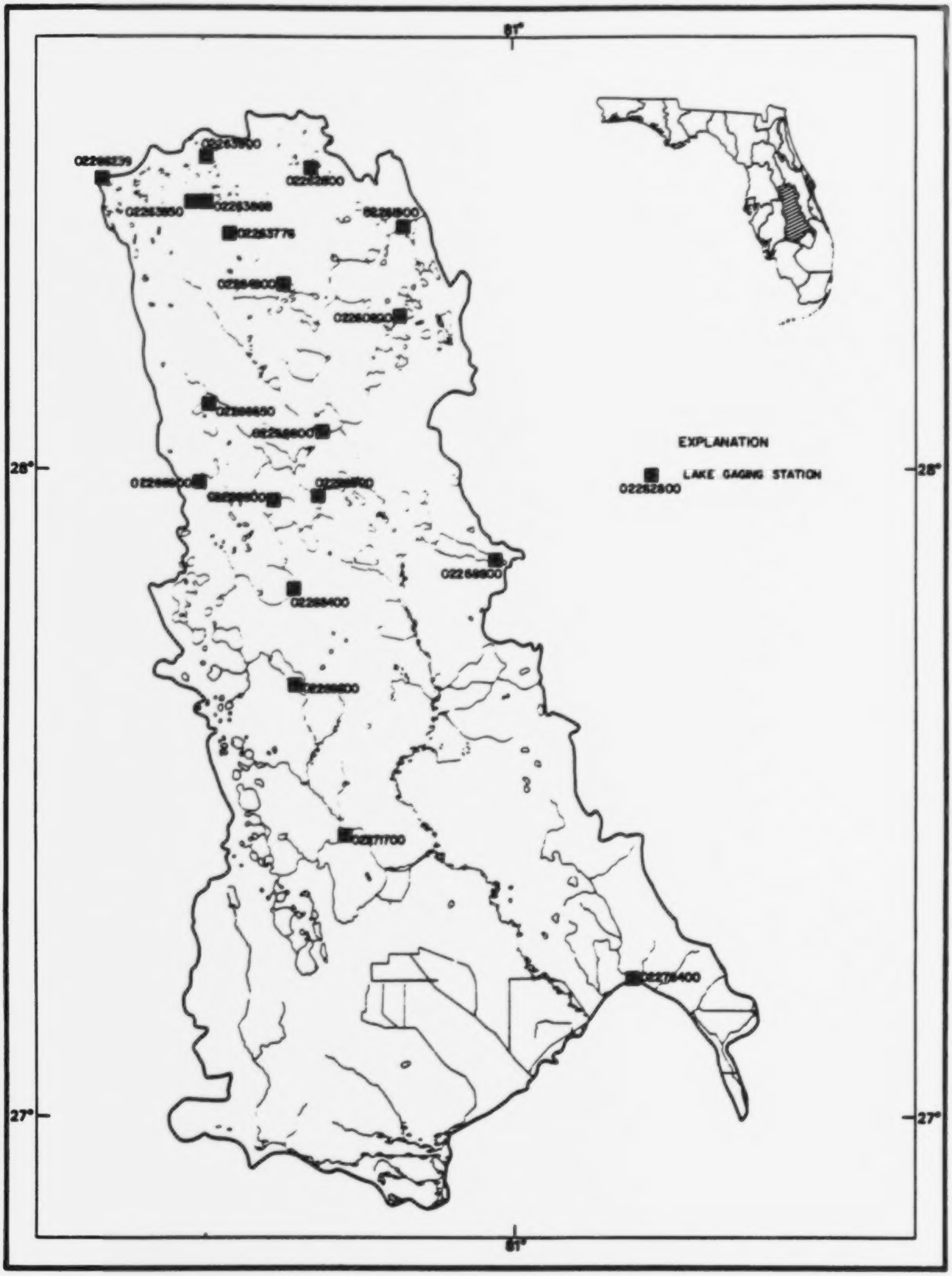

81°
02266239
02263900
02262800
02263850
02263868
02261800
02263776
02264800
02260800
02266650
02268600
EXPLANATION
LAKE GAGING STATION
02262800
28°
28°
02266600
02269000
02268700
02268900
02268400
02269800
02271700
02276400
27°
27°
81°

Figure 27.--Location of lake gaging stations in the Kissimmee River basin, the Taylor Creek basin and inflow to Lake Okeechobee from the north, and Fisheating Creek basin and inflow to Lake Okeechobee from the northwest.

SOUTH FLORIDA

KISSIMMEE RIVER BASIN

02260800 ALLIGATOR LAKE NEAR ASHTON, FL

LOCATION.--Lat 28°15'15", long 81°12'15", in SW¼ sec.10, T.26 S., R.31 E., Osceola County, Hydrologic Unit 03090101, on north shore of lake, 0.2 mi south of U.S. Highway 441 and State Road 15, and 2.5 east of Ashton.

SURFACE AREA.--3,401 acres (5.31 mi^2).

DRAINAGE AREA.--26.6 mi^2.

PERIOD OF RECORD.--November 1941 to current year (once-daily), incomplete. Records of elevations prior to October 1960 are unpublished and available in files of the Orlando Subdistrict office.

GAGE.--Nonrecording gage. Datum of gage is National Geodetic Vertical Datum of 1929 (U.S. Army Corps of Engineers bench mark). Prior to Feb. 19, 1975, at several sites within about 700 ft of present site at datum 60.74 ft higher. Feb. 19, 1975 to Apr. 24, 1986, at several sites on the north side at present datum.

REMARKS.--Lake is one of the Kissimmee River headwaters chain of lakes. Subsequent to 1962, the improvement of canals and natural drains between these lakes and the construction of dams with gated controls has resulted in the partial regulation of lake elevations.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation observed, 66.81 ft, Sept. 25, 1960; minimum observed, 59.52 ft, June 10,11, 1962.

EXTREMES OUTSIDE PERIOD OF RECORD.--An elevation of 67.7 ft was reached in June 1934, from information by local resident.

EXTREMES FOR CURRENT YEAR.--Maximum elevation observed, 63.77 ft, Aug. 23; minimum observed, 62.05 ft, June 16-19, 24-28.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
INSTANT VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	63.32	63.18	---	---	---	---	---	---	62.30	62.31	62.30	63.51
2	63.32	---	---	---	---	---	---	---	62.23	62.31	62.25	63.53
3	63.44	---	63.40	---	---	---	---	---	62.19	62.31	62.25	63.53
4	63.42	---	---	---	---	---	---	---	62.17	62.31	62.25	63.55
5	63.40	---	---	---	---	---	---	62.86	62.17	62.31	62.25	63.55
6	63.38	---	63.40	---	---	---	---	---	62.15	62.33	62.25	63.57
7	63.36	---	---	---	---	---	---	62.75	62.13	62.33	62.25	63.53
8	63.35	---	---	---	---	---	---	62.75	62.11	62.31	62.25	63.51
9	63.35	---	---	---	---	---	---	62.71	62.11	62.29	62.35	63.49
10	63.36	---	---	---	---	---	---	62.69	62.13	62.29	62.39	63.49
11	63.38	---	---	---	---	---	---	62.65	62.11	62.27	62.47	63.45
12	63.36	---	---	---	---	---	---	62.58	62.11	62.27	62.49	63.43
13	63.35	---	---	---	---	---	---	62.55	62.09	62.27	62.69	63.41
14	63.34	---	---	---	---	---	---	62.55	62.09	62.27	62.83	63.39
15	63.33	---	---	---	---	---	---	62.55	62.07	62.27	62.91	63.33
16	63.32	---	---	---	---	---	---	62.55	62.05	62.27	62.95	63.35
17	63.32	---	---	---	---	---	---	62.53	62.05	62.27	62.95	63.41
18	63.31	---	---	---	---	---	---	62.51	62.05	62.27	62.95	63.43
19	63.30	---	---	---	---	---	---	62.51	62.05	62.27	63.15	63.49
20	63.28	---	---	---	---	---	---	62.49	---	62.27	63.65	63.51
21	63.27	---	---	---	---	---	---	62.47	---	62.27	63.75	63.49
22	63.25	63.26	---	---	---	---	---	62.45	---	62.27	63.73	63.47
23	63.24	---	---	---	---	---	---	62.43	---	62.27	63.77	63.51
24	63.24	---	---	---	---	---	---	62.41	62.05	62.27	63.75	63.55
25	63.23	---	---	---	---	---	---	62.39	62.05	62.27	63.73	63.57
26	63.22	63.46	---	---	---	---	---	62.37	62.05	62.23	63.69	63.57
27	63.20	---	---	---	---	63.64	---	62.35	62.05	62.23	63.65	63.55
28	63.20	63.42	---	---	---	---	---	62.35	62.05	62.23	63.61	63.53
29	---	---	---	---	---	---	---	62.37	62.25	62.23	63.57	63.49
30	---	---	---	---	---	---	---	62.37	62.25	62.25	63.53	63.47
31	---	---	---	---	---	---	---	62.37	---	62.30	63.49	---

SOUTH FLORIDA

KISSIMMEE RIVER BASIN

02261900 LAKE MARY JANE NEAR NARCOOSSEE, FL

LOCATION.--Lat 28°22'46", long 81°11'15", in SW¼ sec.23, T.24 S., R.31 E., Orange County, Hydrologic Unit 03090101, on west shore of lake, at public park about 1,000 ft south of Mary Jane-Hart Canal, 6.5 mi northeast of Narcoossee, and 11 mi northeast of St. Cloud.

SURFACE AREA.--1,161 acres (1.81 mi^2).

DRAINAGE AREA.--124 mi^2.

PERIOD OF RECORD.--November 1949 to current year (incomplete). Records of elevations prior to October 1960 are unpublished and available in files of the Orlando Subdistrict office.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (U.S. Army Corps of Engineers bench mark). Prior to Nov. 26, 1973, at datum 56.66 ft higher.

REMARKS.--Lake is one of the Kissimmee River headwaters chain of lakes. Subsequent to 1962, the improvement of canals and natural drains between these lakes and the construction of dams with gated controls has resulted in the partial regulation of lake stages.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily elevation, 64.81 ft, Mar. 20, 1960; minimum daily, 56.89 ft, May 31, 1981.

EXTREMES FOR CURRENT YEAR.--Maximum daily elevation, 61.28 ft, Jan. 24-26; minimum daily, 59.35 ft, June 6,7.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	60.00	60.11	---	60.89	61.13	60.76	60.53	60.10	59.47	59.61	---	---
2	60.00	60.09	---	60.90	61.09	60.79	60.47	60.08	59.44	59.62	---	---
3	60.05	60.09	---	60.90	61.05	60.83	60.44	60.03	59.42	59.68	---	---
4	60.15	60.19	---	60.90	61.03	60.84	60.45	59.99	59.40	59.72	---	---
5	60.18	60.25	---	60.88	61.03	60.84	60.49	59.95	59.38	59.71	---	---
6	60.19	60.29	60.96	60.87	61.01	60.85	60.48	59.91	59.35	59.71	---	---
7	60.20	60.29	60.98	60.87	60.99	60.85	60.46	59.85	59.35	59.72	---	---
8	60.20	60.29	60.99	60.87	60.97	60.87	60.44	59.80	59.45	59.71	---	---
9	60.20	60.29	61.00	60.87	60.93	60.85	60.43	59.78	59.46	59.70	---	---
10	60.21	60.29	61.01	60.87	60.89	60.83	60.42	59.77	59.44	59.68	---	---
11	60.21	60.29	61.00	60.87	60.88	60.83	60.39	59.74	59.42	59.67	---	---
12	60.21	60.29	61.03	60.87	60.88	60.84	60.37	59.72	59.41	59.68	---	59.83
13	60.21	60.29	60.97	60.87	60.88	60.84	60.36	59.70	59.39	59.68	---	59.83
14	60.19	60.29	60.88	60.87	60.88	60.84	60.35	59.70	59.53	59.67	---	59.86
15	60.19	60.28	60.87	60.86	60.88	60.84	60.38	59.76	59.52	59.66	---	59.89
16	60.19	60.28	60.86	60.86	60.88	60.83	60.39	59.75	59.50	59.66	---	59.91
17	60.19	60.28	60.85	60.86	60.88	60.83	60.38	59.74	59.48	59.69	---	59.95
18	60.19	60.28	60.83	60.85	60.87	60.82	60.34	59.72	59.47	59.74	---	59.99
19	60.20	60.27	60.81	60.86	60.86	60.82	60.31	59.69	59.49	59.82	---	60.10
20	60.20	60.27	60.80	60.87	60.86	60.81	60.27	59.67	59.49	---	---	60.10
21	60.19	60.27	60.81	60.89	60.86	60.80	60.23	59.66	59.49	---	---	60.08
22	60.19	60.28	60.82	61.17	60.86	60.79	60.19	59.64	59.50	---	---	60.06
23	60.18	60.67	60.83	61.27	60.83	60.79	60.16	59.63	59.50	---	---	60.07
24	60.17	60.84	60.85	61.28	60.79	60.78	60.12	59.61	59.53	---	---	60.07
25	60.16	---	60.86	61.28	60.77	60.76	60.09	59.59	59.54	---	---	60.09
26	60.15	---	60.86	61.28	60.77	60.75	60.07	59.57	59.52	---	---	60.12
27	60.14	---	60.87	61.27	60.77	60.75	60.07	59.55	59.51	---	---	60.10
28	60.13	---	60.87	61.26	60.76	60.73	60.05	59.55	59.51	---	---	60.09
29	60.13	---	60.88	61.23	---	60.68	60.04	59.59	59.59	---	---	60.06
30	60.12	---	60.88	61.21	---	60.63	60.06	59.58	59.59	---	---	60.05
31	60.11	---	60.89	61.17	---	60.59	---	59.53	---	---	---	---
MEAN	60.16	---	---	60.99	60.90	60.80	60.31	59.74	59.47	---	---	---
MAX	60.21	---	---	61.28	61.13	60.87	60.53	60.10	59.59	---	---	---
MIN	60.00	---	---	60.85	60.76	60.59	60.04	59.53	59.35	---	---	---

KISSIMMEE RIVER BASIN

02262800 LAKE CONWAY AT PINE CASTLE, FL

LOCATION.--Lat 28°27'55", long 81°21'21", in SW¼ sec.19, T.23 S., R.30 E., Orange County, Hydrologic Unit 03090101, near west-central part of lake on north side of peninsula, at Pine Castle.

SURFACE AREA.--1,079 acres (1.69 mi^2).

DRAINAGE AREA.--12.7 mi^2.

PERIOD OF RECORD.--March 1952 to current year (once-daily). Records of elevations prior to October 1960 are unpublished and available in files of the Orlando Subdistrict office.

GAGE.--Nonrecording gage. Datum of gage is National Geodetic Vertical Datum of 1929. Prior to Aug. 25, 1952, at Nela Isle Bridge, 0.2 mi southwest at datum 69.00 ft higher. Aug. 25, 1952, to Sept. 20, 1973, at site 150 ft east at datum 69.00 ft higher. Sept. 21, 1973, to Sept. 6, 1974, at site 150 ft east at present datum.

REMARKS.--Lake elevation is controlled by several drainage wells and a concrete and timber control at outlet. Outflow is to Lake Warren, thence through canal to Boggy Creek.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation observed, 89.10 ft, Mar. 25-29,31, 1960; minimum observed, 82.44 ft, Oct. 23,24, 1981.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
INSTANT VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	86.93	86.40	86.85	86.55	86.67	86.28	86.05	85.83	85.33	85.37	85.31	85.28
2	86.89	86.39	86.82	86.54	86.66	86.30	86.04	85.83	85.31	85.35	85.30	85.51
3	86.93	86.37	86.78	86.53	86.65	86.35	86.03	85.81	85.29	85.34	85.29	85.51
4	87.04	86.47	86.76	86.51	86.64	86.35	86.01	85.79	85.27	85.33	85.28	85.50
5	87.02	86.45	86.74	86.50	86.63	86.34	86.00	85.77	85.25	85.31	85.25	85.55
6	86.98	86.50	86.72	86.50	86.60	86.34	85.99	85.75	85.23	85.30	85.23	85.55
7	86.93	86.48	86.70	86.49	86.59	86.32	85.98	85.73	85.35	85.40	85.20	85.57
8	86.88	86.47	86.69	86.48	86.59	86.34	85.95	85.69	85.38	85.39	85.18	85.55
9	86.83	86.46	86.68	86.48	86.58	86.33	85.92	85.67	85.44	85.37	85.16	85.61
10	86.80	86.45	86.67	86.47	86.55	86.29	85.90	85.64	85.41	85.35	85.18	85.61
11	86.78	86.44	86.66	86.46	86.52	86.27	85.89	85.62	85.40	85.33	85.25	85.62
12	86.75	86.43	86.73	86.46	86.49	86.27	85.85	85.60	85.39	85.32	85.24	85.60
13	86.72	86.42	86.72	86.46	86.48	86.25	85.84	85.57	85.43	85.35	85.36	85.59
14	86.68	86.41	86.70	86.46	86.48	86.24	85.84	85.55	85.40	85.33	85.36	85.58
15	86.64	86.40	86.68	86.46	86.47	86.24	85.87	85.59	85.38	85.31	85.34	85.56
16	86.60	86.40	86.68	86.47	86.46	86.23	85.93	85.58	85.35	85.30	85.33	85.55
17	86.58	86.40	86.66	86.46	86.45	86.23	85.93	85.56	85.36	85.29	85.31	85.53
18	86.57	86.39	86.64	86.45	86.45	86.22	85.90	85.54	85.34	85.27	85.29	85.52
19	86.57	86.38	86.61	86.43	86.44	86.22	85.89	85.52	85.33	85.38	85.29	85.58
20	86.55	86.37	86.59	86.43	86.44	86.20	85.88	85.50	85.31	85.42	85.28	85.58
21	86.54	86.37	86.59	86.44	86.43	86.19	85.86	85.48	85.31	85.41	85.36	85.56
22	86.53	86.35	86.58	86.79	86.43	86.18	85.83	85.46	85.31	85.40	85.35	85.54
23	86.50	86.93	86.58	86.79	86.42	86.18	85.83	85.45	85.29	85.38	85.34	85.58
24	86.49	86.95	86.57	86.79	86.37	86.17	85.81	85.44	85.38	85.36	85.33	85.63
25	86.47	86.93	86.57	86.76	86.34	86.14	85.80	85.41	85.43	85.36	85.31	85.66
26	86.46	86.91	86.56	86.75	86.31	86.14	85.78	85.40	85.42	85.34	85.37	85.69
27	86.45	86.90	86.55	86.74	86.30	86.13	85.76	85.39	85.40	85.32	85.36	85.69
28	86.43	86.94	86.55	86.73	86.29	86.12	85.74	85.37	85.38	85.30	85.34	85.69
29	86.43	86.91	86.55	86.71	---	86.10	85.72	85.37	85.39	85.28	85.32	85.68
30	86.41	86.87	86.55	86.70	---	86.09	85.74	85.36	85.39	85.34	85.30	85.67
31	86.40	---	86.55	86.68	---	86.07	---	85.36	---	85.32	85.29	---
MEAN	86.67	86.55	86.65	86.56	86.49	86.23	85.89	85.57	85.35	85.34	85.29	85.58
MAX	87.04	86.95	86.85	86.79	86.67	86.35	86.05	85.83	85.44	85.42	85.37	85.69
MIN	86.40	86.35	86.55	86.43	86.29	86.07	85.72	85.36	85.23	85.27	85.16	85.28

CAL YR 1988 MEAN 86.58 MAX 87.35 MIN 86.05
WTR YR 1989 MEAN 86.01 MAX 87.04 MIN 85.16

KISSIMMEE RIVER BASIN

02263776 LAKE BRYAN NEAR VINELAND, FL

LOCATION.--Lat 28°21'46", long 81°29'57", in SE¼ sec.27, T.24 S., R.28 E., Orange County, Hydrologic Unit 03090101, on west shore of lake, 1.1 mi south of intersection of Interstate Highway 4 and State Highway 535, and 2.2 mi south of Vineland.

SURFACE AREA.--210 acres (0.33 mi^2).

DRAINAGE AREA.--2.70 mi^2.

PERIOD OF RECORD.--September 1969 to current year (fragmentary).

REVISED RECORDS.--WDR FL-72-2: Drainage area.

GAGE.--Nonrecording gage. Datum of gage is National Geodetic Vertical Datum of 1929 (Orange County bench mark).

REMARKS.--Outflow from lake is to Shingle Creek.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation, 100.33 ft on or about Aug. 11, 1984, from floodmarks; minimum observed, 95.64 ft, May 8, 1981.

ELEVATION, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	ELEVATION ABOVE NGVD (FEET)	DATE	TIME	ELEVATION ABOVE NGVD (FEET)
NOV			JUN		
16...	1525	99.17	28...	1145	97.91
JAN			JUL		
06...	1544	99.44	19...	1207	97.89
MAR			AUG		
14...	1223	99.18	22...	1252	97.76
MAY					
04...	1410	98.76			

KISSIMMEE RIVER BASIN

02263850 BAY LAKE NEAR VINELAND, FL

LOCATION.--Lat 28°24'48", long 81°33'28", in NW¼ sec.7, T.24 S., R.28 E., Orange County, Hydrologic Unit 03090101, on right bank at upstream wingwall of control structure 105A in lateral 105, 200 ft south of natural lake shore line, and 3.5 mi northwest of Vineland.

SURFACE AREA.--436 acres (0.68 mi^2).

DRAINAGE AREA.--14.8 mi^2.

PERIOD OF RECORD.--February 1967 to September 1969; October 1970 to current year.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (Walt Disney World bench mark). Prior to Feb. 7, 1969, on north shore of lake at datum 90.00 ft higher.

REMARKS.--Outflow from lake is through L-105 to Bonnet Creek since fall of 1968. In the fall of 1968, structure 105A was completed and became the control outlet of the lake. Draining of Bay Lake through S-105A began on Dec. 20, 1968. The headwater elevation at S-105A represented the lake level until Aug. 25, 1969, when a dike was constructed 200 ft upstream from the control structure. The lake elevation was then independent of the headwater elevation at S-105A. The dike was removed in August 1970 as the lake refilled. Since August 1970, lake elevation regulated by pumpage from ground water.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily elevation, 95.07 ft, Aug. 18, 1967; minimum daily, 92.55 ft, May 24, 1968, except when lake was drained in 1970.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	94.28	94.04	94.46	94.34	94.42	94.05	93.89	93.70	93.24	93.25	93.33	93.33
2	94.26	94.02	94.43	94.34	94.42	94.09	93.86	93.70	93.22	93.28	93.35	93.33
3	94.39	94.01	94.41	94.34	94.40	94.10	93.85	93.68	93.20	93.31	93.34	93.33
4	94.45	94.08	94.40	94.33	94.39	94.11	93.86	93.67	93.18	93.32	93.34	93.32
5	94.43	94.13	94.38	94.31	94.38	94.12	93.88	93.65	93.17	93.33	93.33	93.31
6	94.40	94.17	94.37	94.31	94.37	94.13	93.86	93.64	93.15	93.35	93.33	93.33
7	94.38	94.15	94.36	94.31	94.36	94.13	93.84	93.62	93.13	93.36	93.32	93.38
8	94.34	94.14	94.36	94.31	94.35	94.12	93.82	93.58	93.11	93.35	93.31	93.38
9	94.32	94.13	94.35	94.31	94.32	94.09	93.80	93.56	93.10	93.34	93.32	93.39
10	94.31	94.12	94.35	94.31	94.28	94.06	93.79	93.55	93.09	93.33	93.31	93.38
11	94.30	94.12	94.38	94.30	94.26	94.04	93.77	93.54	93.08	93.32	93.30	93.37
12	94.29	94.11	94.44	94.30	94.24	94.04	93.75	93.52	93.07	93.31	93.30	93.35
13	94.27	94.11	94.42	94.31	94.23	94.03	93.73	93.50	93.05	93.30	93.33	93.34
14	94.24	94.10	94.40	94.30	94.23	94.02	93.73	93.50	93.04	93.30	93.35	93.33
15	94.23	94.09	94.40	94.30	94.23	94.01	93.79	93.49	93.02	93.29	93.34	93.31
16	94.21	94.09	94.39	94.30	94.21	94.01	93.80	93.47	93.00	93.28	93.33	93.32
17	94.20	94.09	94.38	94.29	94.21	94.00	93.79	93.46	92.98	93.28	93.32	93.37
18	94.20	94.08	94.36	94.27	94.20	94.01	93.78	93.44	92.96	93.29	93.31	93.37
19	94.19	94.08	94.34	94.26	94.20	94.00	93.78	93.41	92.94	93.29	93.33	93.36
20	94.19	94.07	94.33	94.26	94.19	93.99	93.78	93.40	92.94	93.28	93.39	93.35
21	94.18	94.07	94.33	94.32	94.19	93.99	93.76	93.38	92.96	93.28	93.42	93.33
22	94.16	94.09	94.33	94.53	94.19	93.97	93.74	93.37	93.02	93.34	93.41	93.32
23	94.14	94.66	94.33	94.52	94.16	93.98	93.73	93.36	93.09	93.38	93.40	93.41
24	94.13	94.57	94.33	94.49	94.11	93.98	93.72	93.34	93.13	93.37	93.39	93.42
25	94.11	94.54	94.34	94.48	94.08	93.96	93.71	93.32	93.15	93.37	93.38	93.46
26	94.09	94.53	94.34	94.47	94.06	93.95	93.70	93.33	93.14	93.36	93.37	93.54
27	94.08	94.52	94.33	94.46	94.05	93.94	93.68	93.31	93.14	93.35	93.37	93.54
28	94.07	94.52	94.34	94.45	94.05	93.93	93.66	93.30	93.13	93.34	93.35	93.56
29	94.06	94.49	94.33	94.44	---	93.92	93.65	93.29	93.13	93.34	93.33	93.55
30	94.05	94.47	94.34	94.44	---	93.91	93.66	93.27	93.15	93.33	93.32	93.54
31	94.04	---	94.34	94.43	---	93.91	---	93.26	---	93.33	93.31	---
MEAN	94.23	94.21	94.37	94.36	94.24	94.02	93.77	93.47	93.09	93.32	93.34	93.39
MAX	94.45	94.66	94.46	94.53	94.42	94.13	93.89	93.70	93.24	93.38	93.42	93.56
MIN	94.04	94.01	94.33	94.26	94.05	93.91	93.65	93.26	92.94	93.25	93.30	93.31

CAL YR 1988 MEAN 94.14 MAX 94.70 MIN 93.66
WTR YR 1989 MEAN 93.82 MAX 94.66 MIN 92.94

SOUTH FLORIDA

KISSIMMEE RIVER BASIN

02263868 SOUTH LAKE NEAR VINELAND, FL

LOCATION.--Lat 28°24'45", long 81°32'17", in SW¼ sec.8, T.24 S., R.28 E., Orange County, Hydrologic Unit 03090101, on right bank at upstream wingwall of control structure 15 in Canal No. 1, 300 ft south of natural lake shoreline, 1,600 ft west of State Highway 535, and 2.4 mi northwest of Vineland.

SURFACE AREA.--128 acres (0.20 mi^2).

DRAINAGE AREA.--4.0 mi^2, approximately.

PERIOD OF RECORD.--April 1969 to current year. Records for South Lake Outlet at S-15, near Vineland (station 02263869).

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (Walt Disney World bench mark).

REMARKS.--Since January 1969, lake controlled by structure 15. Outflow is to Bonnet Creek through Canal No. 1.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily elevation, 94.50 ft, Apr. 6, 1987; minimum daily, 90.62 ft, July 16, 1981.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	93.94	93.64	94.19	94.09	94.22	93.87	93.53	93.24	92.56	92.22	92.00	91.75
2	93.93	93.61	94.18	94.10	94.20	93.91	93.50	93.21	92.53	92.20	92.07	91.74
3	93.95	93.58	94.17	94.08	94.13	93.90	93.48	93.17	92.50	92.19	92.18	91.73
4	94.02	93.57	94.18	94.06	94.12	93.92	93.48	93.17	92.47	92.20	92.18	91.77
5	94.01	93.63	94.18	94.04	94.13	93.93	93.48	93.17	92.47	92.20	92.16	91.73
6	93.99	93.69	94.17	94.03	94.16	93.90	93.46	93.08	92.47	92.26	92.07	91.71
7	93.97	93.69	94.14	94.03	94.17	93.90	93.41	93.03	92.49	92.27	91.97	91.69
8	93.94	93.72	94.13	94.02	94.17	93.91	93.39	92.98	92.44	92.26	91.88	91.67
9	93.92	93.71	94.13	94.01	94.17	93.89	93.37	92.97	92.45	92.18	91.92	91.66
10	93.92	93.72	94.13	94.01	94.12	93.87	93.34	93.00	92.42	92.18	91.87	91.65
11	93.91	93.68	94.17	94.02	94.07	93.84	93.32	92.98	92.40	92.12	91.85	91.63
12	93.91	93.68	94.23	94.02	94.06	93.83	93.32	92.96	92.39	92.16	91.87	91.61
13	93.84	93.65	94.21	94.00	94.07	93.82	93.30	93.00	92.35	92.12	91.96	91.59
14	93.81	93.64	94.19	93.99	94.00	93.81	93.33	92.95	92.34	92.11	91.96	91.57
15	93.84	93.61	94.15	93.98	94.00	93.81	93.41	92.92	92.29	92.11	92.00	91.55
16	93.80	93.60	94.17	93.99	94.05	93.80	93.41	92.93	92.24	92.10	91.92	91.53
17	93.82	93.59	94.16	93.99	94.04	93.80	93.41	92.88	92.21	92.08	92.01	91.51
18	93.83	93.62	94.14	93.99	94.02	93.76	93.39	92.87	92.21	92.04	91.87	91.49
19	93.81	93.58	94.14	93.99	94.02	93.73	93.36	92.82	92.22	92.08	91.79	91.47
20	93.78	93.59	94.19	93.94	94.02	93.71	93.35	92.76	92.17	92.07	91.78	91.45
21	93.78	93.58	94.17	93.97	94.01	93.69	93.33	92.76	92.16	92.01	91.87	91.43
22	93.77	93.58	94.11	94.20	93.91	93.68	93.32	92.74	92.24	92.02	91.90	91.41
23	93.76	94.25	94.12	94.22	93.91	93.70	93.31	92.74	92.17	92.06	91.92	91.47
24	93.71	94.28	94.13	94.22	93.86	93.69	93.27	92.73	92.19	92.05	91.83	91.49
25	93.66	94.27	94.11	94.21	93.86	93.67	93.25	92.73	92.22	92.05	91.87	91.50
26	93.65	94.27	94.09	94.21	93.85	93.68	93.26	92.74	92.20	92.03	91.80	91.56
27	93.66	94.27	94.10	94.20	93.85	93.65	93.21	92.71	92.18	91.99	91.75	91.57
28	93.66	94.26	94.10	94.21	93.86	93.61	93.18	92.68	92.16	91.97	91.74	91.69
29	93.66	94.21	94.12	94.23	---	93.59	93.16	92.65	92.14	91.94	91.74	91.67
30	93.64	94.21	94.12	94.24	---	93.57	93.18	92.62	92.13	92.00	91.77	91.60
31	93.64	---	94.09	94.23	---	93.55	---	92.59	---	92.00	91.78	---
MEAN	93.82	93.80	94.15	94.08	94.04	93.77	93.35	92.90	92.31	92.11	91.91	91.60
MAX	94.02	94.28	94.23	94.24	94.22	93.93	93.53	93.24	92.56	92.27	92.18	91.77
MIN	93.64	93.57	94.09	93.94	93.85	93.55	93.16	92.59	92.13	91.94	91.74	91.41

CAL YR 1988 MEAN 93.85 MAX 94.49 MIN 93.24
WTR YR 1989 MEAN 93.15 MAX 94.28 MIN 91.41

KISSIMMEE RIVER BASIN

02263900 LAKE BUTLER AT WINDERMERE, FL

LOCATION.--Lat 28°29'26", long 81°32'04", in NW¼ sec.17, T.23 S., R.28 E., Orange County, Hydrologic Unit 03090101, on east shore of lake at Windermere.

SURFACE AREA.--1,665 acres (2.60 mi^2).

DRAINAGE AREA.--14.5 mi^2.

PERIOD OF RECORD.--January 1933 to October 1941 (weekly), incomplete; November 1941 to July 1976 (once daily); August 1976 to current year (weekly), incomplete. Records of elevations prior to October 1960 are unpublished and available in files of the Orlando Subdistrict office.

GAGE.--Nonrecording gage. Datum of gage is 90.00 ft above National Geodetic Vertical Datum of 1929; gage readings have been reduced to elevations above NGVD. Prior to Nov. 27, 1941, at site 500 ft south at datum 10.17 ft higher. Nov. 27, 1941 to Mar. 9, 1942, at site of old hotel pier about 0.4 mi northwest at datum 6.40 ft higher. Mar. 9, 1942 to Dec. 7, 1978, at present site at datum 6.40 ft higher.

REMARKS.--Lake is one of the Cypress Creek headwaters chain of lakes.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation observed, 101.78 ft, Sept. 13, 1960; minimum observed, 94.62 ft, July 21,29, 1981.

EXTREMES FOR CURRENT YEAR.--Maximum elevation observed, 100.22 ft, Nov. 27, Jan. 24; minimum observed, 97.88 ft, Sept. 19.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
INSTANT VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	100.00	99.80	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	98.30	---
3	---	99.56	---	---	---	---	---	99.40	---	---	---	---
4	---	---	---	---	---	---	99.62	---	---	---	---	---
5	100.02	---	---	100.06	---	---	---	99.38	---	---	---	---
6	---	---	100.14	---	---	---	---	---	---	98.70	---	98.00
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	99.66	---	---	99.98	99.90	---	---	---	---	98.16	---
9	---	---	---	---	---	---	---	---	98.76	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	99.24	---	---	---	---
12	99.88	---	---	99.98	---	---	99.48	---	---	98.60	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	99.82	---	---	98.64	---	---	97.98
15	---	---	100.20	---	99.94	99.80	---	---	---	---	---	---
16	---	99.62	---	---	---	---	---	99.16	---	---	98.12	---
17	---	---	---	100.00	---	---	---	---	---	---	---	---
18	---	99.61	---	---	---	---	---	---	---	---	---	---
19	99.76	---	---	---	---	---	99.54	---	---	98.50	---	97.88
20	---	---	100.20	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	98.52	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	99.76	---	99.03	---	---	98.15	---
24	---	---	---	100.22	99.84	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	98.98	---	---	---	---
26	99.66	---	---	---	---	---	99.44	---	---	98.40	---	---
27	---	100.22	---	---	---	---	---	---	---	---	---	---
28	---	---	100.10	---	99.80	---	---	---	---	---	---	98.00
29	---	---	---	---	---	---	---	---	98.56	---	---	---
30	---	---	---	---	---	99.68	---	---	98.61	---	---	---
31	---	---	---	100.00	---	---	---	98.90	---	---	98.08	---

KISSIMMEE RIVER BASIN

02264900 LAKE TOHOPEKALIGA AT KISSIMMEE, FL

LOCATION.--Lat 28°17'20", long 81°24'20", in NW¼ sec.27, T.25 S., R.29 E., Osceola County, Hydrologic Unit 03090101, at north end of lake, on end of public pier at Kissimmee.

SURFACE AREA.--18,790 acres (29.4 mi^2).

DRAINAGE AREA.--620 mi^2, approximately.

PERIOD OF RECORD.--January 1942 to current year. Records of elevations prior to October 1960 are unpublished and available in files of the Orlando Subdistrict office.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929. Prior to June 15, 1950, at site 9 mi south on west shore of lake at datum 50.36 ft higher.

REMARKS.--Lake is one of the Kissimmee River headwaters chain of lakes. Since 1963, the improvement of canals and natural drains between these lakes and the construction of dams with gated controls has resulted in the partial regulation of lake stages.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily elevation, 59.40 ft, Sept. 25, 1960; minimum daily, 48.37 ft, Apr. 22, 1979.

EXTREMES FOR CURRENT YEAR.--Maximum daily elevation, 55.21 ft, Jan. 24,25; minimum daily, 51.91 ft, June 23.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	53.69	53.67	54.91	55.03	55.02	54.53	54.12	53.40	52.02	52.06	52.36	53.58
2	53.70	53.68	54.94	55.02	54.98	54.60	54.13	53.30	52.01	52.07	52.35	53.67
3	53.80	53.71	54.97	55.00	54.98	54.68	54.11	53.28	52.00	52.09	52.35	53.72
4	53.82	53.89	54.99	54.94	54.98	54.71	54.12	53.28	51.97	52.07	52.35	53.68
5	53.79	53.98	55.00	54.98	55.02	54.72	54.15	53.24	51.96	52.11	52.35	53.68
6	53.74	53.95	55.03	55.00	55.03	54.73	54.10	53.15	51.99	52.12	52.34	53.68
7	53.73	53.95	55.06	54.99	55.03	54.67	54.13	53.02	52.00	52.22	52.32	53.71
8	53.73	53.95	55.05	55.00	55.02	54.63	54.13	52.99	52.06	52.23	52.32	53.70
9	53.78	53.96	55.04	55.00	54.92	54.57	54.12	52.96	52.09	52.24	52.31	53.73
10	53.79	53.96	54.99	54.97	54.94	54.59	54.11	52.91	52.03	52.22	52.31	53.74
11	53.82	53.96	54.97	54.98	54.96	54.65	54.03	52.85	52.00	52.20	52.37	53.74
12	53.81	53.96	54.90	55.01	54.95	54.69	53.99	52.86	52.01	52.23	52.47	53.74
13	53.76	53.97	54.86	55.01	54.97	54.71	53.98	52.85	52.01	52.27	52.81	53.76
14	53.74	53.95	54.90	55.02	54.98	54.71	54.00	52.88	52.05	52.27	52.88	53.78
15	53.75	53.95	54.92	55.02	54.92	54.71	54.03	52.89	52.02	52.27	52.92	53.79
16	53.74	53.98	54.92	55.01	54.76	54.72	53.98	52.84	52.04	52.25	52.94	53.79
17	53.74	53.97	54.88	55.00	54.61	54.72	53.94	52.77	51.99	52.26	52.97	53.78
18	53.76	53.96	54.88	54.99	54.57	54.76	53.84	52.68	51.95	52.28	52.97	53.77
19	53.77	53.96	54.90	55.00	54.58	54.77	53.76	52.61	51.98	52.31	53.01	53.79
20	53.78	53.98	54.92	54.99	54.62	54.82	53.70	52.53	51.96	52.33	53.10	53.79
21	53.77	53.95	54.94	54.94	54.66	54.79	53.56	52.44	51.93	52.35	53.20	53.76
22	53.74	53.97	54.96	55.11	54.58	54.76	53.48	52.38	51.94	52.35	53.22	53.85
23	53.75	54.19	54.98	55.18	54.47	54.75	53.41	52.32	51.91	52.33	53.27	53.90
24	53.74	54.38	55.00	55.21	54.47	54.62	53.33	52.27	51.94	52.31	53.31	53.94
25	53.70	54.53	55.01	55.21	54.50	54.54	53.28	52.22	51.95	52.29	53.34	54.03
26	53.72	54.67	55.01	55.20	54.51	54.48	53.24	52.19	51.93	52.26	53.39	54.09
27	53.72	54.76	55.03	55.18	54.54	54.43	53.23	52.18	51.94	52.26	53.44	54.13
28	53.71	54.78	55.05	55.16	54.53	54.39	53.20	52.16	51.94	52.27	53.49	54.14
29	53.69	54.82	55.03	55.13	---	54.35	53.21	52.14	52.02	52.28	53.51	54.16
30	53.68	54.90	55.03	55.10	---	54.31	53.26	52.10	52.03	52.38	53.55	54.19
31	53.70	---	55.03	55.06	---	54.27	---	52.07	---	52.38	53.57	---
MEAN	53.75	54.11	54.97	55.05	54.79	54.63	53.79	52.70	51.99	52.24	52.87	53.83
MAX	53.82	54.90	55.06	55.21	55.03	54.82	54.15	53.40	52.09	52.38	53.57	54.19
MIN	53.68	53.67	54.86	54.94	54.47	54.27	53.20	52.07	51.91	52.06	52.31	53.58

CAL YR 1988 MEAN 53.76 MAX 55.54 MIN 51.60
WTR YR 1989 MEAN 53.72 MAX 55.21 MIN 51.91

02266239 TROUT LAKE NEAR CLERMONT, FL

LOCATION.--Lat 28°27'04", long 81°43'00", in SW¼ sec.28, T.23 S., R.26 E., Lake County, Hydrologic Unit 03090101, on northwest shore of lake, 7.8 mi southeast of Clermont.

SURFACE AREA.--163 acres (0.25 mi^2).

DRAINAGE AREA.--1.31 mi^2.

PERIOD OF RECORD.--March 1970 to current year (weekly), incomplete.

REVISED RECORDS.--WDR FL-81-1: Drainage area, surface area.

GAGE.--Nonrecording gage. Datum of gage is National Geodetic Vertical Datum of 1929.

REMARKS.--Lake is landlocked except at extremely high stages.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation observed, 96.90 ft, Apr. 1,8, 1970; minimum observed, 85.98 ft, Dec. 19,26, 1981.

EXTREMES FOR CURRENT YEAR.--Maximum elevation observed, 96.60 ft, Jan. 29, Feb. 1; minimum observed, 95.50 ft, June 15.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
INSTANT VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	95.86	96.50	96.55	96.60	96.40	96.30	96.10	95.70	95.65	95.78	95.65
2	---	95.83	---	---	---	---	---	---	---	---	---	---
3	96.17	---	---	---	---	---	---	---	---	---	95.86	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	95.62	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	95.88	96.50	96.55	96.40	96.40	96.30	96.05	95.60	95.70	95.75	95.70
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	95.68
13	---	---	---	---	---	---	96.23	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	95.88	96.50	96.55	96.40	96.32	96.25	95.90	95.50	95.95	95.75	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	96.48	---	96.39	---	---	---	---	---	---	---
22	---	96.45	96.50	96.55	---	96.25	96.18	95.80	95.70	95.95	95.65	95.60
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	96.40	---	---	---	---	---	---	---
29	95.90	96.50	96.50	96.60	---	96.18	96.10	95.70	95.65	95.98	95.60	95.75
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---

SOUTH FLORIDA

KISSIMMEE RIVER BASIN

02266600 CYPRESS LAKE NEAR ST. CLOUD, FL

LOCATION.--Lat 28°04'29", long 81°18'07", in SW¼ sec.2, T.28 S., R.30 E., Osceola County, Hydrologic Unit 03090101, on east shore of lake, near mouth of Canoe Creek, and about 12 mi south of St. Cloud.

SURFACE AREA.--4,085 acres (6.38 mi^2).

DRAINAGE AREA.--1,162 mi^2, combined drainage area of Cypress Lake and Lake Hatchineha.

PERIOD OF RECORD.--January 1942 to current year. Records of elevations prior to October 1960 are unpublished and and available in files of the Orlando Subdistrict office.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (U.S. Army Corps of Engineers bench mark). Prior to Dec. 13, 1973, at site 2.3 mi southwest at datum 48.78 ft higher and Dec. 13, 1973 to June 21, 1979, at site 2.3 mi southwest at present datum.

REMARKS.--Lake is one of the Kissimmee River headwaters chain of lakes. Stage is affected by operation of control structures upstream and downstream. Flow into Short Canal begins at about elevation 53.2 ft. Overflow over the south shore begins at a slightly higher stage.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily elevation, 57.18 ft, Sept. 26, 1960; minimum daily, 47.60 ft, June 4, 1971.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	51.61	51.60	51.89	52.53	52.80	51.97	51.41	50.40	49.21	49.01	49.15	49.44
2	51.64	51.59	51.87	52.53	52.77	51.96	51.42	50.36	49.16	49.00	49.12	49.51
3	51.74	51.63	51.89	52.56	52.73	52.02	51.41	50.24	49.15	49.03	49.11	49.56
4	51.72	51.80	51.94	52.49	52.66	52.00	51.43	50.23	49.15	49.02	49.07	49.59
5	51.67	51.90	51.95	52.51	52.64	51.97	51.42	50.28	49.14	49.03	49.05	49.63
6	51.60	51.83	51.97	52.54	52.60	51.94	51.34	50.27	49.18	49.09	49.09	49.68
7	51.61	51.80	52.03	52.52	52.56	51.84	51.41	50.25	49.16	49.07	49.07	49.73
8	51.60	51.80	52.06	52.52	52.51	51.73	51.35	50.14	49.21	49.09	49.07	49.72
9	51.65	51.78	52.12	52.53	52.43	51.60	51.31	50.16	49.20	49.06	49.05	49.72
10	51.67	51.79	52.15	52.50	52.41	51.47	51.29	50.17	49.16	49.03	49.07	49.76
11	51.71	51.79	52.23	52.50	52.47	51.48	51.22	49.98	49.12	49.02	49.04	49.75
12	51.70	51.78	52.33	52.53	52.43	51.51	51.10	49.97	49.12	49.03	49.06	49.75
13	51.64	51.79	52.35	52.54	52.46	51.45	51.07	49.94	49.13	49.09	49.11	49.76
14	51.59	51.76	52.33	52.53	52.44	51.42	51.06	49.95	49.08	49.11	49.15	49.78
15	51.61	51.76	52.35	52.56	52.49	51.40	51.21	50.00	49.10	49.08	49.16	49.79
16	51.63	51.79	52.39	52.54	52.60	51.39	51.07	49.98	49.11	49.09	49.14	49.83
17	51.63	51.79	52.37	52.52	52.58	51.38	51.02	49.96	49.06	49.10	49.11	49.84
18	51.66	51.77	52.35	52.52	52.48	51.39	51.04	49.88	49.03	49.12	49.11	49.82
19	51.68	51.78	52.38	52.52	52.49	51.37	51.01	49.86	49.02	49.14	49.11	49.86
20	51.68	51.80	52.39	52.55	52.46	51.41	50.96	49.80	49.04	49.18	49.12	49.86
21	51.70	51.77	52.41	52.47	52.51	51.47	50.93	49.77	49.02	49.16	49.26	49.88
22	51.67	51.78	52.41	52.70	52.43	51.47	50.83	49.79	49.04	49.16	49.44	49.93
23	51.66	52.00	52.42	52.76	52.33	51.56	50.81	49.73	49.04	49.15	49.39	50.02
24	51.67	51.85	52.44	52.76	52.17	51.55	50.74	49.67	49.06	49.10	49.35	50.02
25	51.63	51.89	52.44	52.75	52.13	51.49	50.57	49.56	49.05	49.11	49.38	50.15
26	51.64	51.94	52.43	52.80	52.11	51.51	50.46	49.47	49.04	49.09	49.36	50.21
27	51.65	51.96	52.45	52.81	52.10	51.51	50.38	49.42	49.04	49.11	49.39	50.26
28	51.64	51.95	52.49	52.79	52.04	51.50	50.29	49.39	49.06	49.16	49.42	50.30
29	51.62	51.85	52.47	52.80	---	51.51	50.28	49.28	49.08	49.15	49.40	50.35
30	51.62	51.90	52.49	52.82	---	51.56	50.32	49.24	49.04	49.13	49.41	50.39
31	51.62	---	52.51	52.80	---	51.55	---	49.25	---	49.14	49.42	---
MEAN	51.65	51.81	52.27	52.61	52.46	51.59	51.01	49.88	49.10	49.09	49.20	49.86
MAX	51.74	52.00	52.51	52.82	52.80	52.02	51.43	50.40	49.21	49.18	49.44	50.39
MIN	51.59	51.59	51.87	52.47	52.04	51.37	50.28	49.24	49.02	49.00	49.04	49.44

CAL YR 1988 MEAN 51.17 MAX 52.82 MIN 48.98
WTR YR 1989 MEAN 50.87 MAX 52.82 MIN 49.00

KISSIMMEE RIVER BASIN

02266650 LAKE MARION NEAR HAINES CITY, FL

LOCATION.--Lat 28°05'56", long 81°31'51", in SE¼ sec.29, T.27 S., R.28 E., Polk County, Hydrologic Unit 03090101, on northeast shore of lake, 4.5 mi east of Haines City.

SURFACE AREA.--2,968 acres (4.64 mi^2).

DRAINAGE AREA.--35.7 mi^2.

PERIOD OF RECORD.--February to August 1958 (weekly), incomplete; September 1958 to current year (once daily). Records of elevations prior to October 1960 are unpublished and available in files of the Orlando Subdistrict office.

GAGE.--Nonrecording gage. Datum of gage is National Geodetic Vertical Datum of 1929 (South Florida Water Management District bench mark). July 21, 1959 to Sept. 8, 1963, at site 500 ft north and Sept. 9, 1963 to Jan. 29, 1974, at present site, at datum 63.22 ft higher.

REMARKS.--Lake is in the headwaters of Kissimmee River. Outflow from lake is through Lake Marion Creek to Lake Hatchineha.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation observed, 67.52 ft, Sept. 12,15, 1960; minimum observed, 64.86 ft, June 1, 1967.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
INSTANT VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	66.42	65.94	66.32	66.12	66.24	65.86	65.86	65.78	65.36	65.46	65.82	65.56
2	66.40	65.94	66.32	66.10	66.22	65.94	65.84	65.76	65.34	65.52	65.82	65.58
3	66.44	65.92	66.30	66.10	66.22	66.06	65.82	65.76	65.34	65.58	65.80	65.58
4	66.44	66.14	66.28	66.08	66.20	66.06	65.80	65.74	65.32	65.60	65.78	65.56
5	66.42	66.20	66.28	66.08	66.20	66.06	65.88	65.74	65.34	65.68	65.76	65.56
6	66.40	66.20	66.28	66.06	66.18	66.10	65.86	65.74	65.34	65.76	65.74	65.66
7	66.38	66.20	66.26	66.04	66.18	66.10	65.84	65.72	65.40	65.80	65.72	65.66
8	66.36	66.18	66.26	66.04	66.16	66.08	65.82	65.70	65.40	65.78	65.70	65.66
9	66.34	66.18	66.24	66.04	66.14	66.06	65.80	65.68	65.38	65.76	65.68	65.64
10	66.32	66.16	66.24	66.02	66.12	66.04	65.78	65.66	65.36	65.74	65.66	65.64
11	66.30	66.14	66.28	66.02	66.10	66.04	65.78	65.64	65.34	65.76	65.70	65.62
12	66.28	66.14	66.28	66.02	66.10	66.02	65.76	65.62	65.32	65.76	65.72	65.62
13	66.26	66.12	66.26	66.00	66.08	66.02	65.76	65.60	65.30	65.78	65.74	65.60
14	66.24	66.12	66.26	66.00	66.08	66.00	65.76	65.58	65.28	65.78	65.74	65.60
15	66.20	66.10	66.24	65.98	66.06	66.00	65.88	65.58	65.26	65.76	65.72	65.62
16	66.18	66.10	66.24	65.98	66.06	65.98	65.88	65.58	65.24	65.76	65.70	65.60
17	66.16	66.10	66.22	65.96	66.04	65.98	65.86	65.56	65.22	65.76	65.68	65.58
18	66.16	66.10	66.20	65.96	66.04	65.96	65.84	65.54	65.20	65.78	65.66	65.66
19	66.14	66.08	66.20	65.94	66.02	65.94	65.84	65.52	65.18	65.78	65.68	65.68
20	66.12	66.08	66.18	65.98	66.02	65.92	65.82	65.50	65.18	65.76	65.68	65.68
21	66.10	66.08	66.18	66.14	66.00	65.90	65.80	65.50	65.20	65.78	65.66	65.72
22	66.10	66.12	66.18	66.28	66.00	65.88	65.80	65.48	65.20	65.82	65.64	65.76
23	66.08	66.40	66.16	66.30	65.98	65.92	65.78	65.46	65.24	65.84	65.64	65.78
24	66.06	66.40	66.16	66.32	65.96	65.92	65.76	65.46	65.26	65.84	65.62	65.86
25	66.06	66.40	66.16	66.30	65.94	65.90	65.76	65.44	65.26	65.84	65.62	65.90
26	66.04	66.38	66.16	66.30	65.92	65.90	65.74	65.42	65.24	65.82	65.60	65.96
27	66.02	66.36	66.14	66.28	65.90	65.88	65.74	65.40	65.24	65.82	65.60	66.02
28	66.00	66.36	66.14	66.26	65.88	65.88	65.72	65.40	65.24	65.80	65.58	66.02
29	65.98	66.34	66.12	66.26	---	65.86	65.70	65.38	65.32	65.80	65.58	66.00
30	65.96	66.34	66.12	66.26	---	65.84	65.78	65.38	65.40	65.84	65.58	66.00
31	65.94	---	66.12	66.24	---	65.86	---	65.36	---	65.84	65.56	---
MEAN	66.20	66.18	66.22	66.11	66.07	65.97	65.80	65.57	65.29	65.75	65.68	65.71
MAX	66.44	66.40	66.32	66.32	66.24	66.10	65.88	65.78	65.40	65.84	65.82	66.02
MIN	65.94	65.92	66.12	65.94	65.88	65.84	65.70	65.36	65.18	65.46	65.56	65.56

CAL YR 1988 MEAN 66.08 MAX 66.76 MIN 65.40

WTR YR 1989 MEAN 65.88 MAX 66.44 MIN 65.18

KISSIMMEE RIVER BASIN

02266900 LAKE PIERCE NEAR WAVERLY, FL

LOCATION.--Lat 27°58'37", long 81°32'33", in NW¼ sec.8, T.29 S., R.28 E., Polk County, Hydrologic Unit 03090101, on west shore of lake, at public boat landing, 4.5 mi east of Waverly, and 5.5 mi northeast of town of Lake Wales.

SURFACE AREA.--3,736 acres (5.84 mi^2).

DRAINAGE AREA.--58.9 mi^2.

PERIOD OF RECORD.--December 1947 to September 1971; October 1971 to current year (fragmentary). Prior to August 1959, records also for Catfish Creek near Lake Wales (station 02267000). Records of elevations prior to October 1960 are unpublished and available in files of the Orlando Subdistrict office.

GAGE.--Nonrecording gage. Datum of gage is National Geodetic Vertical Datum of 1929 (U.S. Army Corps of Engineers bench mark). Prior to Aug. 20, 1959, water-stage recorder on left bank of Catfish Creek 0.2 mi downstream from lake. Aug. 20, 1959, to Sept. 30, 1971, water-stage recorder, and Oct. 1, 1971, to July 13, 1981, nonrecording gage at present site at datum 72.13 ft higher.

REMARKS.--Outflow from lake is through Catfish Creek to Lake Hatchineha, one of the Kissimmee River headwater lakes.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily elevation, 78.91 ft Sept. 17,18, 1960; minimum observed, 75.23 ft, May 24, 1985.

ELEVATION, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	ELEVATION ABOVE NGVD (FEET)	DATE	TIME	ELEVATION ABOVE NGVD (FEET)
NOV			JUN		
15...	1222	76.42	27...	1035	75.50
JAN			JUL		
10...	1355	76.25	21...	1306	75.78
MAR			AUG		
16...	1300	76.30	22...	0936	75.88
MAY					
01...	1050	75.95			

KISSIMMEE RIVER BASIN

02268400 LAKE WEOHYAKAPKA AT INDIAN LAKE ESTATES, FL

LOCATION.--Lat 27°48'50", long 81°23'16", in NE¼ sec.2, T.31 S., R.29 E., Polk County, Hydrologic Unit 03090101, on east shore of lake, on end of public pier at Indian Lake Estates, and 8.5 mi east of Babson Park.

SURFACE AREA.--7,555 acres (11.8 mi^2).

DRAINAGE AREA.--93.5 mi^2.

PERIOD OF RECORD.--February 1958 to September 1960 (weekly to monthly); October 1960 to September 1961 (fragmentary); October 1961 to current year (weekly). Records of elevations prior to October 1960 are unpublished and available in files of the Orlando Subdistrict Office.

GAGE.--Nonrecording gage. Datum of gage is National Geodetic Vertical Datum of 1929 (Marion Engineer Associates, Inc. bench mark).

REMARKS.--Lake is at the headwater of Weohyakapka Creek.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation observed, 63.43 ft on or about Sept. 30, 1960, from floodmark; minimum observed, 58.90 ft, July 4,25, 1981.

EXTREMES FOR CURRENT YEAR.--Maximum elevation observed, 61.90 ft, Oct. 3; minimum observed, 60.30 ft, June 19.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
INSTANT VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	61.52	---	---	---	---	---	60.76	---	---	60.56	---
2	---	---	---	61.24	---	---	---	---	---	---	---	---
3	61.90	---	---	---	---	---	60.84	---	---	60.63	---	---
4	---	---	---	---	---	---	---	---	---	---	---	60.70
5	---	---	61.28	---	---	---	---	---	60.50	---	---	---
6	---	---	---	---	61.28	61.08	---	---	---	---	---	---
7	---	61.47	---	---	---	---	---	---	---	---	60.60	---
8	---	---	---	---	---	---	---	60.64	---	---	---	---
9	---	---	---	61.20	---	---	---	---	---	---	---	---
10	61.78	---	---	---	---	---	60.78	---	---	60.60	---	---
11	---	---	---	---	---	---	---	---	---	---	---	60.72
12	---	---	61.32	---	---	---	---	---	60.44	---	---	---
13	---	---	---	---	61.19	61.05	---	---	---	---	---	---
14	---	61.35	---	---	---	---	---	---	---	---	60.66	---
15	---	---	---	---	---	---	---	60.62	---	---	---	---
16	---	---	---	61.16	---	---	---	---	---	---	---	---
17	61.48	---	---	---	---	---	60.88	---	---	60.58	---	---
18	---	---	---	---	---	---	60.85	---	---	---	---	60.76
19	---	---	61.30	---	---	---	---	---	60.30	---	---	---
20	---	---	---	---	61.10	61.00	---	---	---	---	---	---
21	---	61.30	---	---	---	---	---	60.60	60.31	---	60.70	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	61.28	61.10	---	---	---	---	---	---	---
24	61.44	---	---	---	---	---	60.83	---	---	60.50	---	---
25	---	---	---	---	---	---	---	---	---	---	---	61.00
26	---	---	61.28	---	---	---	---	---	60.32	---	---	---
27	---	---	---	---	60.98	60.90	---	---	---	---	---	---
28	---	61.35	---	---	---	---	---	---	---	---	60.68	---
29	---	---	---	---	---	---	---	60.55	---	---	---	---
30	---	---	---	61.37	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---

KISSIMMEE RIVER BASIN

02268600 LAKE ROSALIE NEAR LAKE WALES, FL

LOCATION.--Lat 27°56'23", long 81°25'14", in SE¼ sec.21, T.29 S., R.29 E., Polk County, Hydrologic Unit 03090101, on west side of lake, in boat basin at Monroe's Trailer Park, 10.5 mi northeast of town of Lake Wales.

SURFACE AREA.--4,592 acres (7.18 mi^2).

DRAINAGE AREA.--133 mi^2.

PERIOD OF RECORD.--December 1941 to February 1942 (weekly); March to July 1942, August 1942 to August 1943 (fragmentary); March 1958 to April 1967 (weekly), incomplete; May 1967 to current year. Records of elevations prior to October 1960 are unpublished and available in files of the Orlando Subdistrict office.

GAGE.--Nonrecording gage. Datum of gage is National Geodetic Vertical Datum of 1929 (U.S. Army Corps of Engineers bench mark). Prior to Mar. 5, 1942, nonrecording gage at site 1.3 mi northeast at datum 53.19 ft higher. Mar. 5, 1942, to July 27, 1942, and Mar. 20, 1958, to Sept. 19, 1974, recording or nonrecording gages at several sites within 1.5 mi at datum 49.41 ft higher, and Sept. 19, 1974, to Oct. 17, 1979, nonrecording gage at site 400 ft west at present datum.

REMARKS.--Outflow from lake is through diversion canal to Lake Kissimmee, the most downstream of the Kissimmee River headwaters chain of lakes and also through Rosalie Creek to Tiger Lake, thence through Tiger Creek to Lake Kissimmee.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation observed, 55.93 ft, Oct. 3, 1960; minimum observed, 50.30 ft, June 2-4, 1967.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
INSTANT VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	54.51	53.78	53.62	53.35	53.48	53.08	52.88	52.55	52.07	52.06	51.87	51.86
2	54.50	53.76	53.61	53.35	53.47	53.14	52.86	52.58	52.04	52.06	51.87	51.95
3	54.49	53.73	53.57	53.34	53.46	53.21	52.84	52.56	52.02	52.06	51.85	51.94
4	54.47	53.90	53.56	53.32	53.46	53.22	52.82	52.57	51.99	52.05	51.85	51.95
5	54.46	53.91	53.54	53.30	53.44	53.21	52.81	52.52	51.98	52.04	51.84	51.94
6	54.44	53.92	53.54	53.27	53.44	53.21	52.80	52.50	52.06	52.04	51.82	51.92
7	54.40	53.89	53.54	53.27	53.43	53.20	52.78	52.48	52.11	52.02	51.80	51.92
8	54.36	53.87	53.52	53.27	53.42	53.19	52.76	52.42	52.12	52.01	51.79	51.91
9	54.34	53.85	53.52	53.26	53.40	53.18	52.72	52.40	52.12	51.98	51.79	51.90
10	54.30	53.84	53.50	53.26	53.35	53.16	52.70	52.37	52.10	51.96	51.77	51.88
11	54.27	53.81	53.50	53.25	53.33	53.14	52.68	52.34	52.08	51.94	51.75	51.86
12	54.24	53.80	53.56	53.25	53.30	53.14	52.66	52.30	52.08	51.92	51.74	51.84
13	54.21	53.78	53.54	53.24	53.30	53.12	52.63	52.29	52.06	51.91	51.86	51.82
14	54.19	53.78	53.51	53.23	53.30	53.10	52.73	52.26	52.04	52.01	51.88	51.80
15	54.18	53.77	53.50	53.23	53.29	53.10	52.82	52.34	52.02	52.02	51.84	51.80
16	54.15	53.75	53.50	53.22	53.28	53.10	52.81	52.33	51.99	51.98	51.84	51.80
17	54.12	53.73	53.49	53.20	53.26	53.10	52.82	52.31	51.97	51.98	51.83	51.90
18	54.10	53.73	53.48	53.18	53.24	53.09	52.80	52.30	51.94	51.94	51.83	51.89
19	54.09	53.70	53.46	53.18	53.22	53.07	52.78	52.28	51.93	51.95	51.89	51.93
20	54.07	53.69	53.43	53.17	53.20	53.06	52.75	52.25	51.90	51.94	51.90	51.91
21	54.05	53.69	53.42	53.17	53.20	53.04	52.75	52.23	51.89	51.92	51.90	51.90
22	54.02	53.67	53.42	53.45	53.20	53.02	52.73	52.24	51.94	51.97	51.89	51.88
23	53.99	53.79	53.42	53.52	53.12	53.01	52.70	52.22	51.92	51.96	51.99	51.85
24	53.96	53.76	53.41	53.53	53.14	53.03	52.68	52.18	51.96	51.94	51.97	51.85
25	53.94	53.74	53.40	53.52	53.12	53.02	52.66	52.17	51.97	51.96	51.95	51.84
26	53.92	53.73	53.40	53.51	53.10	53.00	52.64	52.15	51.96	51.94	51.95	51.94
27	53.90	53.72	53.38	53.51	53.09	52.99	52.62	52.14	51.95	51.92	51.93	51.98
28	53.86	53.68	53.38	53.50	53.08	52.98	52.61	52.11	51.92	52.00	51.92	51.98
29	53.85	53.65	53.36	53.50	---	52.96	52.58	52.12	51.92	51.94	51.91	51.98
30	53.83	53.66	53.36	53.48	---	52.93	52.56	52.08	51.93	51.87	51.90	51.97
31	53.80	---	53.36	53.48	---	52.91	---	52.08	---	51.86	51.88	---
MEAN	54.16	53.77	53.48	53.33	53.29	53.09	52.73	52.31	52.00	51.97	51.86	51.90
MAX	54.51	53.92	53.62	53.53	53.48	53.22	52.88	52.58	52.12	52.06	51.99	51.98
MIN	53.80	53.65	53.36	53.17	53.08	52.91	52.56	52.08	51.89	51.86	51.74	51.80

CAL YR 1988 MEAN 53.86 MAX 55.09 MIN 52.48
WTR YR 1989 MEAN 52.82 MAX 54.51 MIN 51.74

KISSIMMEE RIVER BASIN

02268800 LAKE MARIAN NEAR KENANSVILLE, FL

LOCATION.--Lat 27°52'22", long 81°03'08", in NE¼ sec.18, T.30 S., R.33 E., Osceola County, Hydrologic Unit 03090101, on northeast shore of lake in canal at county boat ramp, 4.5 mi west of Kenansville.

SURFACE AREA.--5,727 acres (8.95 mi^2).

DRAINAGE AREA.--49.6 mi^2.

PERIOD OF RECORD.--February 1958 to current year (weekly), incomplete. Records of elevations prior to October 1960 are unpublished and available in files of the Orlando Subdistrict office.

GAGE.--Nonrecording gage. Datum of gage is National Geodetic Vertical Datum of 1929 (South Florida Water Management District bench mark). Prior to Nov. 16, 1972, at present site and other nearby sites at datum 57.02 ft higher. Nov. 16, 1972, to Oct. 28, 1980, at site 0.6 mi southeast at present datum.

REMARKS.--Lake is in the headwaters of the Kissimmee River. Outflow is through a canal to Lake Jackson, thence through Jackson Canal to Lake Kissimmee. During high water there is flow through Fodderstack Slough to Jackson Canal.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation observed, 61.63 ft, Sept. 27, 1960; minimum observed, 55.36 ft, June 7, 1985.

EXTREMES FOR CURRENT YEAR.--Maximum elevation observed, 58.58 ft, Sept. 29; minimum observed, 57.02 ft, June 16.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
INSTANT VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	57.51	---	---	---	---	---	57.90
2	---	---	57.76	---	---	---	---	---	57.16	---	---	---
3	---	---	---	---	---	57.70	---	---	---	---	---	---
4	---	57.68	---	---	57.80	---	---	---	---	---	57.78	---
5	---	---	---	---	---	---	---	57.36	---	---	---	---
6	---	---	---	57.54	---	---	---	---	---	---	---	---
7	58.10	---	---	---	---	---	57.62	---	---	57.88	---	---
8	---	---	---	---	---	---	---	---	---	---	---	58.18
9	---	---	57.80	---	---	---	---	---	57.08	---	---	---
10	---	---	---	---	---	57.86	---	---	---	---	---	---
11	---	57.60	---	57.51	57.74	---	---	---	---	---	57.82	---
12	---	---	---	---	---	---	---	57.30	---	---	---	---
13	---	---	---	57.48	---	---	---	---	---	---	---	---
14	57.96	---	---	---	---	---	57.50	---	---	57.92	---	---
15	---	---	---	---	---	---	---	---	---	---	---	58.22
16	---	---	57.70	---	---	---	---	---	57.02	---	57.84	---
17	---	57.78	---	---	---	57.80	---	---	---	---	---	---
18	---	57.56	---	---	57.68	---	---	---	---	---	57.90	---
19	---	---	---	---	---	---	---	57.28	---	---	---	---
20	---	---	---	57.44	---	---	---	---	---	---	---	---
21	57.86	---	---	---	---	---	57.48	---	---	58.00	---	---
22	---	---	---	---	---	---	---	---	---	---	---	58.32
23	---	---	57.62	---	---	---	---	---	57.94	---	---	---
24	---	---	---	---	---	57.82	---	---	---	---	---	---
25	---	57.80	---	---	57.62	---	---	---	---	---	57.90	---
26	---	---	---	---	---	---	---	57.20	---	---	---	---
27	---	---	---	57.86	---	---	---	---	---	---	---	---
28	57.78	---	---	---	---	---	57.42	---	---	57.82	---	---
29	---	---	---	---	---	---	---	---	57.74	---	---	58.58
30	---	---	57.60	---	---	---	---	---	57.82	---	---	---
31	---	---	---	---	---	57.78	---	---	---	---	---	---

KISSIMMEE RIVER BASIN

02268900 LAKE KISSIMMEE NEAR LAKE WALES, FL

LOCATION.--Lat 27°48'14", long 81°11'53", in NW¼ sec.11, T.31 S., R.31 E., Osceola County, Hydrologic Unit 03090101, on right bank at upstream side of lock and control structure 65, 0.1 mi downstream from bridge on State Highway 60, and 25 mi southeast of town of Lake Wales.

SURFACE AREA.--34,760 acres (54.3 mi^2).

DRAINAGE AREA.--1,607 mi^2 at State Highway 60, includes areas drained by Lake Weohyakapka and Lake Marian.

PERIOD OF RECORD.--August 1929 to September 1989 (discontinued). Records of elevations prior to October 1960 are unpublished and available in files of the Orlando Subdistrict office. Prior to March 1942, records for Kissimmee River at outlet of Lake Kissimmee. Since June 11, 1965, records for Kissimmee River at S-65, near Lake Wales (station 02268903).

REVISED RECORDS.--WRD FL 1970: Drainage area. WDR FL-81-2: Surface area.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by South Florida Water Management District). Prior to Mar. 16, 1942, nonrecording gage at bridge on State Highway 60 at datum 1.25 ft lower. Mar. 16, 1942 to May 11, 1950, water-stage recorder on southwest shore of lake, and May 11, 1950 to June 10, 1965, water-stage recorder near northwest end of lake, at datum 46.94 ft higher.

REMARKS.--Lake is located between the upper and lower reaches of the Kissimmee River and is the most downstream of the river headwater chain of lakes. Since July 1964 lake elevation partially regulated by operation of structure 65 at lake outlet and by storage releases at several control structures in the river basin upstream.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily elevation, 56.64 ft, Oct. 12,13, 1953; minimum daily, 42.87 ft, May 25, 1977.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	51.56	51.64	51.97	52.45	52.60	51.88	51.43	50.02	49.05	49.00	49.05	49.37
2	51.56	51.62	52.01	52.47	52.59	51.89	51.28	50.18	49.04	49.01	49.07	49.43
3	51.56	51.56	51.96	52.50	52.58	51.89	51.27	50.15	49.01	49.02	49.07	49.42
4	51.67	51.68	51.97	52.58	52.56	51.85	51.23	50.04	48.99	49.02	49.05	49.48
5	51.71	51.70	51.96	52.48	52.49	51.79	51.29	50.01	49.00	48.95	49.03	49.52
6	51.76	51.78	51.96	52.44	52.45	51.74	51.36	50.05	48.97	48.94	49.01	49.58
7	51.79	51.76	51.96	52.45	52.43	51.85	51.28	50.14	49.01	48.99	49.00	49.62
8	51.78	51.76	52.00	52.45	52.45	51.88	51.22	50.03	48.99	48.98	48.96	49.67
9	51.71	51.75	52.03	52.46	52.55	51.94	51.19	49.90	48.96	48.96	48.97	49.68
10	51.69	51.76	52.07	52.49	52.54	51.81	51.17	49.94	49.02	48.95	49.02	49.69
11	51.66	51.76	52.11	52.49	52.48	51.56	51.17	50.00	49.03	48.95	49.02	49.71
12	51.68	51.76	52.30	52.47	52.47	51.39	51.09	49.98	48.98	48.96	49.02	49.72
13	51.72	51.75	52.42	52.47	52.36	51.36	50.98	49.88	48.97	48.99	49.07	49.73
14	51.72	51.77	52.32	52.46	52.31	51.34	50.89	49.82	48.93	49.00	49.10	49.70
15	51.69	51.76	52.32	52.46	52.35	51.31	50.89	49.88	48.92	48.97	49.09	49.71
16	51.67	51.72	52.36	52.50	52.41	51.31	50.88	49.80	48.88	49.01	49.08	49.74
17	51.68	51.74	52.48	52.51	52.47	51.32	50.78	49.70	48.90	48.99	49.05	49.79
18	51.65	51.73	52.45	52.50	52.53	51.32	50.71	49.63	48.94	48.99	49.04	49.85
19	51.64	51.70	52.37	52.47	52.48	51.33	50.66	49.56	48.92	49.01	49.04	49.91
20	51.64	51.71	52.37	52.49	52.36	51.28	50.60	49.51	48.92	49.03	49.07	49.90
21	51.65	51.74	52.38	52.57	52.26	51.29	50.61	49.47	48.95	49.03	49.08	49.98
22	51.67	51.68	52.39	52.78	52.36	51.29	50.54	49.48	48.96	49.04	49.16	49.83
23	51.66	51.87	52.39	52.77	52.47	51.27	50.43	49.43	48.97	49.05	49.23	49.92
24	51.64	51.99	52.41	52.69	52.36	51.40	50.36	49.38	48.97	49.03	49.24	50.00
25	51.65	51.88	52.41	52.64	52.17	51.44	50.33	49.32	48.96	49.09	49.26	50.03
26	51.60	51.80	52.43	52.61	52.05	51.39	50.28	49.27	48.96	49.10	49.27	50.07
27	51.58	51.81	52.40	52.62	51.95	51.36	50.21	49.20	48.92	49.07	49.28	50.15
28	51.59	51.93	52.40	52.62	51.92	51.35	50.17	49.14	48.94	49.06	49.33	50.20
29	51.60	51.94	52.43	52.60	---	51.33	50.13	49.08	48.98	49.06	49.35	50.22
30	51.62	51.89	52.45	52.60	---	51.30	50.08	49.04	49.00	49.04	49.36	50.22
31	51.60	---	52.44	52.61	---	51.35	---	49.03	---	49.03	49.35	---
MEAN	51.66	51.76	52.26	52.54	52.39	51.51	50.82	49.68	48.97	49.01	49.12	49.79
MAX	51.79	51.99	52.48	52.78	52.60	51.94	51.43	50.18	49.05	49.10	49.36	50.22
MIN	51.56	51.56	51.96	52.44	51.92	51.27	50.08	49.03	48.88	48.94	48.96	49.37

CAL YR 1988 MEAN 50.94 MAX 52.75 MIN 48.89
WTR YR 1989 MEAN 50.78 MAX 52.78 MIN 48.88

KISSIMMEE RIVER BASIN

02269600 LAKE ARBUCKLE NEAR AVON PARK, FL

LOCATION.--Lat 27°39'55", long 81°22'38", in SW¼ sec. 25, T.32 S., R.29 E., Polk County, Hydrologic Unit 03090101, on U.S. Air Force recreation pier on south shore of lake, 9.5 mi northeast of Avon Park.

SURFACE AREA.--3,787 acres (5.92 mi^2).

DRAINAGE AREA.--170 mi^2.

PERIOD OF RECORD.--December 1941 to current year. Records of elevations prior to October 1960 are unpublished and available in files of the Orlando Subdistrict office.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929. June 27, 1945, to Nov. 15, 1950, May 9, 1956, to June 15, 1962, and May 11, 1967, to Dec. 11, 1975, nonrecording gage at site 500 ft northwest near head of Arbuckle Creek at datum 51.53 ft higher.

REMARKS.--Lake is the most downstream of the Arbuckle Creek headwater lakes.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily elevation, 58.3 ft, Sept. 24, 1948, from floodmark; minimum daily, 51.15 ft, June 10, 1985.

EXTREMES OUTSIDE PERIOD OF RECORD.--An elevation of 58.7 ft, was reached in 1926 and 1928, from information by local residents.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	55.17	54.23	54.03	53.60	53.47	52.93	52.81	52.33	51.82	52.33	52.33	53.65
2	55.13	54.21	54.01	53.59	53.46	52.96	52.72	52.38	51.81	52.38	52.36	53.68
3	55.14	54.17	53.97	53.59	53.44	53.09	52.72	52.34	51.79	52.41	52.52	53.80
4	55.19	54.31	53.96	53.58	53.44	53.13	52.70	52.30	51.77	52.43	52.53	53.82
5	55.16	54.33	53.93	53.52	53.42	53.13	52.71	52.28	51.76	52.42	52.53	53.85
6	55.12	54.33	53.91	53.50	53.40	53.14	52.71	52.28	51.76	52.41	52.52	53.89
7	55.08	54.31	53.89	53.49	53.39	53.18	52.66	52.29	51.78	52.40	52.51	53.90
8	55.03	54.29	53.88	53.47	53.39	53.19	52.62	52.22	51.77	52.39	52.48	53.89
9	54.97	54.26	53.87	53.47	53.38	53.20	52.59	52.17	51.75	52.38	52.48	53.86
10	54.93	54.25	53.85	53.46	53.33	53.18	52.58	52.16	51.75	52.37	52.52	53.85
11	54.90	54.23	53.84	53.44	53.30	53.13	52.58	52.15	51.74	52.36	52.51	53.82
12	54.86	54.21	53.90	53.42	53.27	53.11	52.55	52.13	51.72	52.36	52.59	53.79
13	54.82	54.19	53.89	53.41	53.23	53.10	52.52	52.09	51.70	52.38	53.00	53.77
14	54.77	54.17	53.85	53.39	53.21	53.08	52.51	52.08	51.68	52.37	53.25	53.73
15	54.73	54.14	53.84	53.38	53.20	53.07	52.55	52.13	51.66	52.35	53.32	53.70
16	54.69	54.11	53.83	53.38	53.19	53.05	52.55	52.11	51.63	52.34	53.33	53.70
17	54.66	54.10	53.84	53.36	53.18	53.04	52.52	52.09	51.62	52.32	53.32	53.72
18	54.63	54.07	53.79	53.34	53.17	53.03	52.51	52.06	51.65	52.33	53.32	53.72
19	54.60	54.04	53.76	53.32	53.15	53.02	52.49	52.03	51.70	52.38	53.38	53.76
20	54.57	54.03	53.74	53.31	53.11	52.98	52.50	52.02	51.69	52.35	53.45	53.74
21	54.54	54.02	53.73	53.33	53.09	52.97	52.56	52.00	51.70	52.35	53.45	53.73
22	54.51	54.03	53.73	53.51	53.13	52.95	52.53	52.00	51.68	52.33	53.47	53.69
23	54.47	54.12	53.72	53.54	53.14	52.93	52.50	51.99	51.69	52.33	53.53	53.86
24	54.44	54.13	53.71	53.52	53.07	52.95	52.47	51.98	51.81	52.32	53.55	53.95
25	54.42	54.10	53.70	53.52	53.00	52.93	52.46	51.95	52.02	52.32	53.63	54.01
26	54.37	54.07	53.69	53.51	52.97	52.90	52.45	51.95	52.03	52.31	53.66	54.06
27	54.34	54.06	53.66	53.52	52.95	52.87	52.43	51.92	52.02	52.29	53.74	54.09
28	54.32	54.09	53.65	53.51	52.94	52.85	52.40	51.90	52.02	52.28	53.75	54.11
29	54.29	54.05	53.64	53.50	---	52.83	52.37	51.88	52.09	52.27	53.73	54.11
30	54.27	54.04	53.63	53.49	---	52.81	52.34	51.85	52.15	52.26	53.70	54.09
31	54.24	---	53.61	53.49	---	52.80	---	51.83	---	52.29	53.67	---
MEAN	54.72	54.16	53.81	53.47	53.23	53.02	52.55	52.09	51.79	52.35	53.10	53.84
MAX	55.19	54.33	54.03	53.60	53.47	53.20	52.81	52.38	52.15	52.43	53.75	54.11
MIN	54.24	54.02	53.61	53.31	52.94	52.80	52.34	51.83	51.62	52.26	52.33	53.65

CAL YR 1988 MEAN 54.40 MAX 56.46 MIN 52.91
WTR YR 1989 MEAN 53.18 MAX 55.19 MIN 51.62

KISSIMMEE RIVER BASIN

02271700 LAKE ISTOKPOGA NEAR DE SOTO CITY, FL

LOCATION.--Lat 27°19'55", long 81°15'05", in sec.19 or 20, T.36 S., R.31 E., Highlands County, Hydrologic Unit 03090101, 33 ft from right bank, 350 ft upstream from control structure 68 at Lake Istokpoga, 7.5 mi northeast of town of Lake Placid, and 12.2 mi southeast of De Soto City.

SURFACE AREA.--27,500 acres (43.0 mi^2).

DRAINAGE AREA.--607 mi^2.

PERIOD OF RECORD.--August 1936 to current year. July 7, 1965 to Sept. 30, 1989, records for Canal 41A at S-68 at Lake Istokpoga, near Lake Placid (station 02273200). Records of elevations prior to October 1960 are unpublished and available in files of the Orlando Subdistrict office.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by South Florida Water Management District). Prior to May 19, 1937, nonrecording gage at datum 40.54 ft higher and May 19, 1937, to Aug. 17, 1942 at datum 38.54 ft higher, at site on northwest shore of lake 4 mi southwest of mouth of Arbuckle Creek. Aug. 20, 1942, to July 6, 1965, water-stage recorder near mouth of Arbuckle Creek at datum 34.07 ft higher. July 7, 1965, to Nov. 27, 1973, water-stage recorder at present site at datum 30.00 ft higher.

REMARKS.--Lake controlled by dam with removable stoplogs in Istokpoga Canal from June 1949 to July 1962. Since July 21, 1962, lake controlled by operation of structure 68 on Canal 41A on southeast shore of lake. Dam on Istokpoga Canal is still in place. Flow occurs at times in this canal.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily elevation, 42.9 ft, estimated, Sept. 17, 1945; minimum daily, 35.40 ft, May 30, 1962.

EXTREMES FOR CURRENT YEAR.--Maximum daily elevation, 39.42 ft, Oct. 6; minimum daily, 37.18 ft, June 27.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	39.28	39.09	39.27	39.15	39.29	39.03	39.03	38.39	37.57	37.32	37.48	38.14
2	39.30	39.07	39.27	39.16	39.29	39.04	38.93	38.46	37.56	37.35	37.52	38.27
3	39.36	39.03	39.20	39.18	39.29	39.11	38.89	38.37	37.51	37.36	37.60	38.37
4	39.41	39.20	39.15	39.21	39.30	39.14	38.85	38.27	37.48	37.42	37.60	38.42
5	39.40	39.24	39.14	39.14	39.29	39.12	38.91	38.23	37.46	37.38	37.58	38.49
6	39.42	39.30	39.13	39.11	39.28	39.14	38.95	38.22	37.43	37.38	37.58	38.55
7	39.40	39.28	39.11	39.10	39.27	39.25	38.92	38.28	37.39	37.37	37.53	38.63
8	39.35	39.29	39.11	39.10	39.30	39.30	38.85	38.18	37.35	37.36	37.58	38.67
9	39.30	39.29	39.12	39.09	39.36	39.35	38.83	38.07	37.35	37.35	37.62	38.66
10	39.28	39.30	39.13	39.10	39.33	39.35	38.83	38.05	37.41	37.35	37.62	38.67
11	39.26	39.30	39.12	39.10	39.27	39.25	38.84	38.07	37.34	37.33	37.63	38.69
12	39.29	39.30	39.20	39.08	39.26	39.17	38.83	38.08	37.35	37.36	37.71	38.70
13	39.31	39.30	39.25	39.09	39.19	39.16	38.78	38.02	37.36	37.38	37.85	38.71
14	39.32	39.32	39.17	39.07	39.15	39.15	38.83	38.02	37.29	37.31	37.92	38.70
15	39.30	39.31	39.16	39.09	39.16	39.13	38.86	38.16	37.27	37.30	37.93	38.68
16	39.27	39.28	39.17	39.10	39.17	39.12	38.87	38.14	37.19	37.30	37.92	38.70
17	39.28	39.29	39.23	39.11	39.17	39.13	38.86	38.10	37.22	37.33	37.90	38.74
18	39.25	39.28	39.18	39.10	39.20	39.15	38.89	38.05	37.25	37.35	37.92	38.82
19	39.24	39.26	39.13	39.08	39.19	39.15	38.90	38.00	37.24	37.41	37.94	38.90
20	39.23	39.26	39.11	39.08	39.13	39.10	38.87	37.97	37.21	37.46	37.92	38.91
21	39.23	39.26	39.13	39.08	39.09	39.10	38.89	37.94	37.22	37.47	37.97	38.94
22	39.24	39.20	39.15	39.27	39.23	39.09	38.85	37.95	37.19	37.45	38.01	38.89
23	39.23	39.26	39.14	39.30	39.37	39.04	38.79	37.95	37.20	37.46	38.02	38.98
24	39.20	39.36	39.15	39.27	39.30	39.10	38.74	37.93	37.22	37.50	38.04	39.02
25	39.21	39.30	39.16	39.24	39.16	39.12	38.71	37.89	37.20	37.50	38.05	39.04
26	39.17	39.22	39.16	39.22	39.10	39.08	38.70	37.86	37.20	37.51	38.07	39.13
27	39.14	39.23	39.13	39.25	39.07	39.04	38.64	37.81	37.18	37.47	38.06	39.17
28	39.14	39.31	39.14	39.27	39.06	39.01	38.57	37.77	37.19	37.49	38.06	39.20
29	39.12	39.28	39.15	39.27	---	38.98	38.51	37.74	37.22	37.45	38.10	39.21
30	39.12	39.25	39.15	39.28	---	38.96	38.48	37.67	37.24	37.45	38.10	39.25
31	39.10	---	39.14	39.28	---	38.99	---	37.57	---	37.45	38.09	---
MEAN	39.26	39.26	39.16	39.16	39.22	39.12	38.81	38.04	37.31	37.40	37.84	38.77
MAX	39.42	39.36	39.27	39.30	39.37	39.35	39.03	38.46	37.57	37.51	38.10	39.25
MIN	39.10	39.03	39.11	39.07	39.06	38.96	38.48	37.57	37.18	37.30	37.48	38.14

CAL YR 1988 MEAN 38.79 MAX 39.62 MIN 37.30
WTR YR 1989 MEAN 38.61 MAX 39.42 MIN 37.18

02276400 LAKE OKEECHOBEE, FL

LOCATION.--Center of lake, lat 26°57', long 80°50', in southern Florida, Hydrologic Unit 03090201.

SURFACE AREA.--436,000 acres (681 mi^2) at elevation 14 ft above National Geodetic Vertical Datum, from data provided by U.S. Army Corps of Engineers.

DRAINAGE AREA.--About 5,650 mi^2.

PERIOD OF RECORD.--October 1931 to current year. Records of elevations prior to October 1960 available as follows: from 1912 to 1914 in reports or files of U.S. Army Corps of Engineers, 1915 to September 1931 in reports or files of Everglades Drainage District, and October 1931 to 1960 in files of the Orlando Subdistrict office.

REVISED RECORDS.--WRD FL 1969: Surface area. WDR FL-77-1: capacity table.

GAGE.--Three water-stage recorders at Hurricane Gate No. 2, Hurricane Gate No. 6 and Port Mayaca. Datum of gages is National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers). Prior to Oct. 1, 1941, nonrecording gage at St. Lucie Canal. Oct. 1, 1941, to Dec. 31, 1950, seven nonrecording gages at various locations on rim of lake. Prior to Oct. 1, 1933, at datum 1.01 ft lower. Oct. 1, 1933, to Sept. 30, 1946, at datum 1.44 ft lower.

REMARKS.--Lake is diked to form a reservoir and is regulated by control structure gates at several outlets. It is used for navigation, municipal water supply, irrigation, and flood control. Total usable capacity is 2,860,000 acre-ft between elevations 10.5 and 17.5 ft.

COOPERATION.--Records of elevations and capacity table furnished by U.S. Army Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation observed, 18.77 ft, Nov. 2, 1947; minimum daily, 9.79 ft, July 30,31, Aug. 1, 1981.

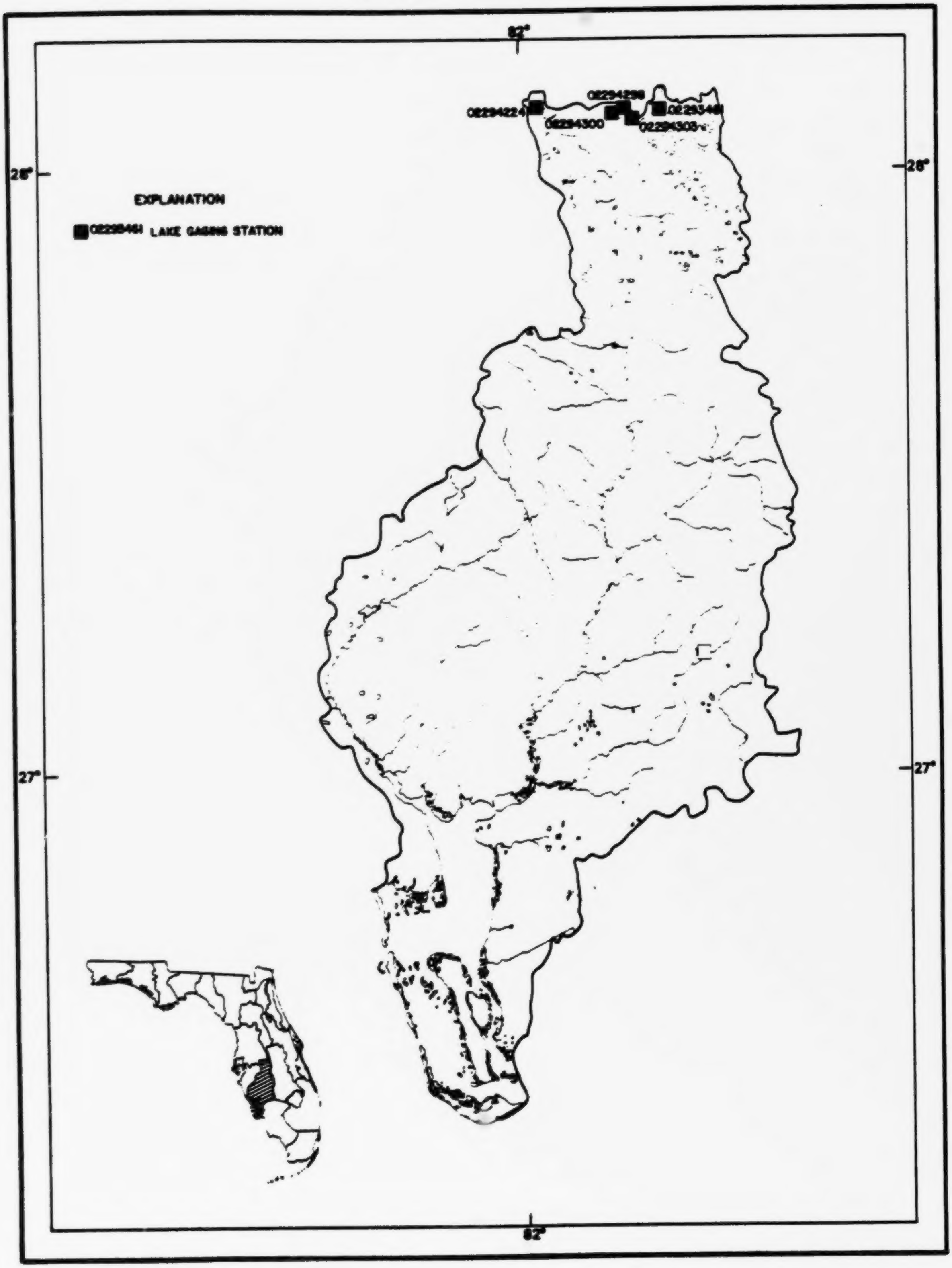
Capacity table, water year 1988-89 (elevation, in feet, and capacity, in acre-feet)

10.0	2,040,000	15.0	3,950,000
11.0	2,370,000	16.0	4,380,000
12.0	2,720,000	17.0	4,830,000
13.0	3,110,000	18.0	5,290,000
14.0	3,530,000		

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15.76	15.14	14.81	14.42	14.10	13.34	13.06	12.95	11.97	11.27	11.20	11.43
2	15.74	15.09	14.77	14.41	14.07	13.35	13.03	12.92	11.93	11.34	11.21	11.43
3	15.73	15.08	14.75	14.42	14.05	13.45	13.00	12.91	11.88	11.42	11.22	11.49
4	15.70	15.19	14.71	14.39	14.04	13.53	13.02	12.88	11.84	11.41	11.20	11.57
5	15.66	15.23	14.71	14.37	14.01	13.57	13.06	12.87	11.79	11.43	11.19	11.61
6	15.65	15.21	14.73	14.35	14.01	13.60	13.07	12.86	11.78	11.42	11.16	11.69
7	15.65	15.19	14.72	14.32	13.99	13.66	13.05	12.80	11.76	11.40	11.15	11.68
8	15.64	15.14	14.71	14.30	13.96	13.62	13.03	12.74	11.74	11.37	11.13	11.69
9	15.64	15.13	14.68	14.27	13.90	13.60	12.99	12.68	11.72	11.37	11.16	11.68
10	15.63	15.14	14.66	14.25	13.87	13.57	12.95	12.66	11.71	11.36	11.16	11.67
11	15.60	15.12	14.68	14.22	13.84	13.61	12.90	12.59	11.68	11.33	11.17	11.65
12	15.55	15.11	14.70	14.22	13.80	13.65	12.85	12.53	11.66	11.29	11.17	11.66
13	15.50	15.08	14.69	14.21	13.79	13.60	12.82	12.51	11.62	11.26	11.22	11.65
14	15.49	15.06	14.65	14.21	13.76	13.55	12.80	12.48	11.60	11.24	11.24	11.63
15	15.49	15.04	14.62	14.23	13.74	13.51	12.85	12.51	11.58	11.23	11.28	11.60
16	15.46	15.03	14.58	14.20	13.72	13.50	12.90	12.54	11.54	11.21	11.33	11.63
17	15.43	15.03	14.56	14.19	13.69	13.47	12.94	12.53	11.41	11.20	11.34	11.63
18	15.41	14.99	14.53	14.13	13.65	13.44	12.97	12.48	11.39	11.20	11.33	11.68
19	15.35	14.98	14.52	14.12	13.61	13.43	12.98	12.45	11.37	11.22	11.33	11.74
20	15.34	14.96	14.51	14.14	13.61	13.43	12.99	12.42	11.38	11.25	11.35	11.73
21	15.32	14.95	14.50	14.14	13.58	13.41	13.00	12.41	11.36	11.27	11.40	11.73
22	15.30	14.96	14.50	14.15	13.56	13.40	13.00	12.38	11.33	11.28	11.44	11.74
23	15.29	14.94	14.48	14.15	13.50	13.39	13.00	12.36	11.32	11.26	11.45	11.80
24	15.28	14.91	14.48	14.15	13.41	13.35	12.98	12.33	11.32	11.25	11.45	11.88
25	15.25	14.93	14.48	14.13	13.38	13.30	12.96	12.28	11.32	11.24	11.46	12.06
26	15.25	14.90	14.47	14.15	13.37	13.30	12.93	12.26	11.29	11.23	11.45	12.12
27	15.23	14.89	14.45	14.15	13.35	13.27	12.90	12.23	11.32	11.24	11.43	12.15
28	15.19	14.86	14.45	14.14	13.33	13.24	12.86	12.19	11.29	11.22	11.44	12.18
29	15.17	14.85	14.44	14.17	---	13.21	12.83	12.12	11.30	11.20	11.45	12.17
30	15.16	14.83	14.43	14.16	---	13.17	12.92	12.07	11.29	11.20	11.44	12.16
31	15.16	---	14.39	14.16	---	13.13	---	12.02	---	11.20	11.45	---
MEAN	15.45	15.03	14.59	14.23	13.74	13.44	12.95	12.51	11.55	11.28	11.30	11.75
MAX	15.76	15.23	14.81	14.42	14.10	13.66	13.07	12.95	11.97	11.43	11.46	12.18
MIN	15.16	14.83	14.39	14.12	13.33	13.13	12.80	12.02	11.29	11.20	11.13	11.43

CAL YR 1988 MEAN 15.59 MAX 16.32 MIN 14.39
WTR YR 1989 MEAN 13.15 MAX 15.76 MIN 11.13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28°
EXPLANATION
02293461 LAKE GAGING STATION
27°
27°
82°

Figure 28.--Location of lake gaging stations in the Peace and Myakka River basins, Charlotte Harbor and coastal area.

PEACE RIVER BASIN

02293461 LAKE ALFRED AT LAKE ALFRED, FL

LOCATION.--Lat 28°05'41", long 81°44'06", in NW¼ sec.32, T.27 S., R.26 E., Polk County, Hydrologic Unit 03100101, on east shore of lake in town of Lake Alfred.

SURFACE AREA.--736 acres (1.15 mi^2).

DRAINAGE AREA.--2.93 mi^2.

PERIOD OF RECORD.--March 1961 to September 1962; September 1969 to August 1975 (twice weekly); September 1975 to September 1983 (weekly), incomplete; October 1983 to September 1984 (fragmentary); October 1984 to October 1985 (twice weekly), incomplete; November 1985 to current year (once daily).

GAGE.--Water-stage recorder. Datum of gage is 120.00 ft above National Geodetic Vertical Datum of 1929; gage readings have been reduced to elevations above NGVD. Prior to Feb. 24, 1981, at several sites and datums within 0.2 mi; Feb. 24, 1981 to Nov. 29, 1985 nonrecording gage at present site and datum.

REMARKS.--Lake is one of a group of lakes in the southern part of an extensive area of swampy flatlands and sandy ridges at a relatively high elevation, called the Green Swamp. Streams that flow into five major drainage systems originate in or near the Green Swamp area.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation observed, 132.08 ft, Mar. 30, Apr. 2-4, 1961; minimum observed, 122.40 ft, May 24, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum elevation observed, 126.76 ft, Jan. 28-31, Feb. 1; minimum observed, 125.65 ft, June 21.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
INSTANT VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	126.53	126.17	126.60	126.60	126.76	126.46	---	---	125.81	125.83	126.18	126.18
2	126.51	126.16	126.58	126.60	126.75	126.55	---	---	125.79	125.89	126.28	126.22
3	126.55	126.14	126.57	126.60	126.75	126.57	---	---	125.76	125.96	126.32	126.21
4	126.56	126.24	126.56	126.60	126.75	126.57	---	---	125.74	126.00	126.31	126.19
5	126.55	126.26	126.56	126.58	126.74	---	---	126.08	125.75	126.03	126.29	126.18
6	126.53	126.29	126.55	126.57	126.74	---	---	---	125.73	126.07	126.27	126.24
7	126.50	126.28	126.55	126.56	126.73	---	---	---	125.70	126.18	126.27	126.31
8	126.48	126.27	126.55	126.56	126.73	---	---	---	125.71	126.17	126.25	126.30
9	126.46	126.26	126.55	126.56	126.72	---	---	---	125.69	126.15	126.27	126.29
10	126.44	126.25	126.56	126.56	126.69	---	---	---	125.68	126.13	126.27	126.30
11	126.43	126.24	126.56	126.56	126.67	---	---	---	125.66	126.11	126.28	126.29
12	126.42	126.24	126.64	126.56	126.65	---	---	125.92	125.75	126.19	126.24	126.27
13	126.41	126.23	126.63	126.55	126.64	---	---	125.91	125.73	126.19	126.21	126.30
14	126.39	126.23	126.62	126.55	126.63	---	---	126.03	125.71	126.18	126.26	126.28
15	126.37	126.22	126.62	126.54	126.63	---	---	126.01	125.69	126.17	126.28	126.33
16	126.35	126.21	126.62	126.54	126.62	---	---	125.99	125.72	126.16	126.27	126.32
17	126.34	126.21	126.62	126.55	126.61	---	---	125.98	125.71	126.15	126.26	126.32
18	126.33	126.20	126.60	126.54	126.60	---	---	125.96	125.70	126.16	126.24	126.39
19	126.32	126.19	126.59	126.53	126.59	---	---	125.94	125.68	126.15	126.23	126.37
20	126.32	126.18	126.58	126.52	126.59	---	---	125.91	125.66	126.14	126.24	126.35
21	126.30	126.18	126.58	126.54	126.58	---	---	125.89	125.65	126.14	126.26	126.32
22	126.29	126.17	126.59	126.73	126.58	---	---	125.88	125.78	126.13	126.24	126.41
23	126.28	126.58	126.59	126.75	126.56	---	---	125.86	125.77	126.26	126.25	126.43
24	126.26	126.61	126.60	126.76	126.53	126.47	---	125.83	125.77	126.28	126.24	126.43
25	126.26	126.60	126.60	126.75	126.50	---	---	125.81	125.77	126.28	126.23	126.56
26	126.23	126.60	126.60	126.75	126.48	---	---	125.80	125.76	126.26	126.26	126.57
27	126.22	126.60	126.60	126.75	126.48	---	---	125.78	125.76	126.25	126.26	126.56
28	126.21	126.61	126.60	126.76	126.46	---	---	125.76	125.73	126.23	126.25	126.55
29	126.20	126.60	126.60	126.76	---	---	---	125.86	125.72	126.22	126.23	126.54
30	126.19	126.59	126.60	126.76	---	---	---	125.83	125.77	126.20	126.22	126.54
31	126.18	---	126.60	126.76	---	---	---	125.83	---	126.19	126.20	---
MEAN	126.37	126.32	126.59	126.62	126.63	---	---	---	125.73	126.14	126.25	126.35
MAX	126.56	126.61	126.64	126.76	126.76	---	---	---	125.81	126.28	126.32	126.57
MIN	126.18	126.14	126.55	126.52	126.46	---	---	---	125.65	125.83	126.18	126.18

CAL YR 1988 MEAN 126.63 MAX 127.37 MIN 126.10

PEACE RIVER BASIN

02294224 LAKE GIBSON NEAR LAKELAND, FL

LOCATION.--Lat 28°06'40", long 81°57'18", in NW¼ sec.30, T.27 S., R.24 E., Polk County, Hydrologic Unit 03100101, on northeast shore of lake, on private pier, and 4.6 mi north of Lakeland.

SURFACE AREA.--477 acres (0.75 mi^2).

DRAINAGE AREA.--4.31 mi^2 .

PERIOD OF RECORD.--July 1954 to November 1959 (fragmentary); October 1969 to current year (incomplete). Records of elevations prior to October 1969 are unpublished and available in files of the Orlando Subdistrict office.

GAGE.--Nonrecording gage. Datum of gage is 135.00 ft above National Geodetic Vertical Datum of 1929; gage readings have been reduced to elevations above NGVD. Prior to October 1969, reference point at site on south shore of lake at datum 11.4 ft higher (by altimeter); October 1969 to March 1975, at present site at datum 0.93 ft higher.

REMARKS.--Lake level is controlled by stoplogs and gate in culverts at outlet.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation observed, 145.4 ft, Sept. 8, 1988; minimum observed, 140.40 ft, June 6-8,12, 1985.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
INSTANT VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	142.86	142.49	143.07	142.68	142.75	142.38	142.43	142.28	141.81	142.22	142.69	142.66
2	142.90	142.48	143.00	142.68	142.73	142.50	142.40	142.31	141.78	142.22	142.75	142.70
3	142.89	142.48	142.94	142.68	142.73	142.53	142.38	142.30	141.76	142.23	142.80	142.73
4	142.87	142.47	142.88	142.67	142.73	142.56	142.35	142.28	141.73	142.22	142.79	142.75
5	142.84	142.47	142.83	142.67	142.72	142.55	142.43	142.27	141.71	142.20	142.76	142.72
6	142.81	142.68	142.80	142.67	142.72	142.55	142.43	142.26	141.73	142.18	142.73	142.70
7	142.78	142.68	142.79	142.66	142.71	142.54	142.42	142.24	141.71	142.23	142.71	142.68
8	142.75	142.67	142.78	142.66	142.70	142.54	142.42	142.23	141.82	142.23	142.68	142.66
9	142.73	142.67	142.77	142.66	142.69	142.53	142.40	142.20	141.82	142.21	142.65	142.64
10	142.72	142.67	142.76	142.66	142.68	142.51	142.37	142.17	141.81	142.19	142.63	142.61
11	142.70	142.66	142.76	142.66	142.67	142.50	142.35	142.14	141.81	142.16	142.61	142.59
12	142.68	142.66	142.86	142.65	142.64	142.49	142.33	142.12	141.79	142.34	142.60	142.56
13	142.66	142.65	142.84	142.65	142.62	142.49	142.30	142.11	141.78	142.34	142.67	142.60
14	142.64	142.65	142.82	142.65	142.60	142.48	142.36	142.09	141.77	142.35	142.67	142.59
15	142.62	142.64	142.82	142.67	142.58	142.48	142.36	142.07	141.78	142.34	142.66	142.57
16	142.62	142.64	142.80	142.67	142.56	142.48	142.40	142.06	141.80	142.33	142.64	142.55
17	142.61	142.63	142.80	142.69	142.55	142.47	142.38	142.04	141.86	142.35	142.61	142.54
18	142.60	142.63	142.80	142.69	142.53	142.47	142.36	142.02	141.84	142.34	142.58	142.52
19	142.60	142.63	142.78	142.69	142.52	142.46	142.37	142.00	141.83	142.32	142.58	142.51
20	142.60	142.62	142.76	142.70	142.49	142.45	142.34	141.98	141.82	142.32	142.56	142.49
21	142.59	142.62	142.74	142.86	142.47	142.45	142.33	141.97	141.84	142.31	142.58	142.48
22	142.59	142.62	142.73	143.12	142.44	142.44	142.32	141.95	141.90	142.34	142.58	142.47
23	142.57	143.61	142.72	143.13	142.43	142.44	142.30	141.92	141.89	142.36	142.56	142.76
24	142.55	143.58	142.70	143.09	142.43	142.50	142.28	141.91	141.92	142.40	142.54	142.77
25	142.54	143.56	142.70	143.04	142.42	142.50	142.26	141.89	141.91	142.44	142.53	142.80
26	142.52	143.48	142.69	143.00	142.41	142.49	142.24	141.87	141.91	142.43	142.73	142.90
27	142.51	143.40	142.69	142.95	142.40	142.49	142.22	141.87	141.89	142.42	142.76	142.87
28	142.51	143.32	142.69	142.90	142.39	142.48	142.20	141.86	142.04	142.44	142.74	142.84
29	142.50	143.24	142.69	142.85	---	142.46	142.19	141.85	142.12	142.46	142.72	142.81
30	142.50	143.16	142.68	142.80	---	142.45	142.22	141.84	142.18	142.49	142.70	142.78
31	142.49	---	142.68	142.78	---	142.44	---	141.82	---	142.49	142.69	---
MEAN	142.66	142.83	142.79	142.77	142.58	142.49	142.34	142.06	141.85	142.32	142.66	142.66
MAX	142.90	143.61	143.07	143.13	142.75	142.56	142.43	142.31	142.18	142.49	142.80	142.90
MIN	142.49	142.47	142.68	142.65	142.39	142.38	142.19	141.82	141.71	142.16	142.53	142.47

CAL YR 1988 MEAN 142.86 MAX 145.40 MIN 142.36
WTR YR 1989 MEAN 142.50 MAX 143.61 MIN 141.71

PEACE RIVER BASIN

02294298 LAKE ARIETTA NEAR AUBURNDALE, FL

LOCATION.--Lat 28°05'43", long 81°47'43", in NE¼ sec.34, T.27 S., R.25 E., Polk County, Hydrologic Unit 03100101, on southeast shore of lake, 2.3 mi north of Auburndale.

SURFACE AREA.--764 acres (1.19 mi^2).

DRAINAGE AREA.--3.70 mi^2.

PERIOD OF RECORD.--August 1970 to September 1976 (once-daily); October 1976 to September 1978 (thrice weekly), incomplete; October 1978 to current year (once-daily), incomplete.

GAGE.--Nonrecording gage. Datum of gage is 100.00 ft above National Geodetic Vertical Datum of 1929; gage readings have been reduced to elevations above NGVD. Prior to Nov. 21, 1972 at site nearby at datum 0.10 ft lower and Nov. 22, 1972 to Sept. 8, 1980 at several sites nearby at present datum.

REMARKS.--Lake is in the Saddle Creek Branch area of Peace River headwaters and level is controlled by structure P-3.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation observed, 143.34 ft, Mar. 31, Apr. 1,2,3, 1983; minimum observed, 136.50 ft, May 25, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum elevation observed, 141.02 ft, Jan. 24-30; minimum observed 139.93 ft, June 21.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
INSTANT VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	140.40	140.85	140.80	141.01	140.79	140.75	140.62	140.21	140.23	140.46	---
2	---	140.39	140.84	140.80	141.01	140.82	140.75	140.64	140.18	140.26	140.44	140.20
3	---	---	140.84	140.80	141.01	140.89	140.74	140.64	140.16	---	140.42	---
4	---	140.45	140.80	140.80	141.01	140.89	140.78	140.61	140.15	140.31	140.41	140.18
5	---	---	140.79	140.79	141.01	140.90	140.79	140.59	140.12	140.30	140.39	140.20
6	---	140.50	---	140.79	141.01	140.90	140.78	140.58	140.11	140.35	140.39	140.19
7	---	140.49	140.78	140.78	141.01	140.92	140.76	140.58	140.09	140.32	140.38	---
8	---	140.49	140.78	140.78	---	140.90	140.75	140.52	140.12	140.35	140.36	140.17
9	---	140.47	140.78	140.78	---	140.90	140.74	140.50	140.11	140.33	140.32	140.16
10	---	140.47	140.80	140.77	---	140.88	140.71	140.48	140.08	140.30	---	140.14
11	---	140.47	---	140.77	140.96	140.88	140.70	140.44	140.09	140.31	140.29	140.12
12	140.60	---	140.88	140.77	---	140.87	140.68	140.42	140.06	140.34	140.31	140.09
13	---	140.46	140.88	140.77	140.92	140.87	140.66	140.41	140.05	---	140.30	140.08
14	---	140.46	140.87	140.76	140.91	140.86	140.67	140.40	140.03	140.30	140.27	140.06
15	---	140.45	---	140.76	140.89	140.86	140.67	140.39	140.07	140.29	140.24	---
16	---	---	---	140.79	140.89	140.85	140.75	140.38	140.03	140.30	140.24	140.03
17	140.55	140.44	---	140.79	140.88	140.83	140.75	140.37	140.00	140.29	140.21	---
18	140.54	---	140.84	---	140.88	140.82	140.73	140.35	139.99	---	140.29	140.01
19	---	140.43	140.83	140.77	140.88	140.81	140.70	140.32	139.97	---	140.29	140.00
20	140.52	140.42	140.83	---	140.86	140.80	140.70	140.30	139.94	140.25	140.30	---
21	---	140.41	140.83	---	140.86	140.78	140.67	140.28	139.93	140.31	140.28	139.97
22	140.50	140.41	140.83	---	140.85	140.77	140.65	140.26	139.97	140.34	140.29	140.13
23	140.49	140.90	140.83	---	140.85	140.81	140.61	140.25	140.07	---	140.27	140.18
24	140.48	140.90	140.82	141.02	140.84	140.81	140.60	140.24	140.10	140.46	140.25	140.21
25	140.48	---	---	141.02	140.83	140.81	140.59	140.22	140.09	140.49	140.22	140.36
26	---	---	---	141.02	---	140.80	140.58	140.20	140.06	140.44	140.21	140.38
27	140.46	140.89	140.80	141.02	140.76	140.80	140.56	140.19	140.05	140.41	140.20	---
28	140.46	---	140.80	141.02	140.76	140.79	140.56	140.17	140.13	140.39	140.20	140.37
29	140.46	---	140.80	141.02	---	140.78	140.60	140.22	140.14	140.46	140.17	140.36
30	---	---	140.80	141.02	---	140.77	140.60	140.25	140.17	140.45	140.15	---
31	140.42	---	140.80	141.01	---	140.76	---	140.23	---	140.45	140.14	---
MEAN	---	---	---	---	---	140.84	140.69	140.39	140.08	---	---	---
MAX	---	---	---	---	---	140.92	140.79	140.64	140.21	---	---	---
MIN	---	---	---	---	---	140.76	140.56	140.17	139.93	---	---	---

PEACE RIVER BASIN

02294300 LAKE WHISTLER NEAR AUBURNDALE, FL

LOCATION.--Lat 28°05'18", long 81°48'54", in SE¼ sec.33, T.27 S., R.25 E., Polk County, Hydrologic Unit 03100101, on west shore of lake, on private pier, 2.2 mi northwest of Auburndale.

SURFACE AREA.--78.0 acres (0.12 mi^2).

DRAINAGE AREA.--4.33 mi^2.

PERIOD OF RECORD.--August 1970 to current year (once-daily), incomplete.

REVISED RECORDS.--WDR FL-80-3: Drainage area.

GAGE.--Nonrecording gage. Datum of gage is 100.00 ft above National Geodetic Vertical Datum of 1929; gage readings have been reduced to elevations above NGVD. Prior to Jan. 5, 1972, at site 0.4 mi south at datum 0.08 ft lower; Jan. 5, 1972, to Nov. 20, 1980, at site 0.4 mi south at present datum.

REMARKS.--Lake is in the Saddle Creek Branch area of Peace River headwaters.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation observed, 138.12 ft, Apr. 10, 1983; minimum observed, 134.50 ft, May 8, 1976.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
INSTANT VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	137.08	136.80	137.13	137.04	137.02	136.74	136.74	136.66	136.26	136.44	136.94	136.86
2	137.08	136.79	137.12	137.04	137.00	136.84	136.72	136.68	136.24	136.46	136.95	136.90
3	137.12	136.78	137.10	137.04	137.00	136.86	136.70	136.68	136.22	136.48	136.94	136.90
4	137.10	136.86	137.10	137.03	136.98	136.86	136.70	136.67	136.20	136.50	136.92	136.88
5	137.08	136.88	137.09	137.02	136.96	136.90	136.78	136.66	136.18	136.50	136.92	136.88
6	137.06	136.90	137.08	137.01	136.95	136.90	136.76	136.64	136.16	136.50	136.90	136.88
7	137.04	136.88	137.08	137.00	136.94	136.88	136.75	136.62	136.16	136.60	136.89	136.90
8	137.02	136.86	137.08	137.00	136.94	136.92	136.74	136.60	136.20	136.60	136.88	136.90
9	137.00	136.86	137.08	136.99	136.92	136.90	136.72	136.59	136.20	136.59	136.87	136.90
10	136.98	136.85	137.07	136.98	136.90	136.88	136.70	136.58	136.18	136.58	136.87	136.90
11	136.98	136.84	137.06	136.97	136.98	136.86	136.70	136.56	136.17	136.57	136.88	136.89
12	136.97	136.83	137.14	136.96	136.96	136.84	136.68	136.54	136.16	136.64	136.86	136.88
13	136.96	136.82	137.14	136.96	136.95	136.83	136.66	136.52	136.14	136.63	136.80	136.88
14	136.96	136.82	137.12	136.96	136.94	136.82	136.66	136.50	136.14	136.64	136.82	136.86
15	136.94	136.81	137.11	136.96	136.92	136.81	136.74	136.49	136.12	136.64	136.82	136.84
16	136.94	136.80	137.10	136.95	136.90	136.80	136.76	136.48	136.10	136.64	136.80	136.82
17	136.94	136.80	137.10	136.94	136.88	136.80	136.75	136.46	136.10	136.64	136.80	136.80
18	136.92	136.80	137.09	136.94	136.86	136.79	136.74	136.44	136.09	136.62	136.80	136.80
19	136.92	136.79	137.08	136.93	136.84	136.78	136.72	136.42	136.08	136.62	136.94	136.80
20	136.90	136.78	137.08	136.92	136.82	136.77	136.72	136.40	136.06	136.62	136.94	136.78
21	136.90	136.78	137.08	136.98	136.80	136.76	136.70	136.40	136.08	136.62	136.94	136.76
22	136.88	136.78	137.08	137.16	136.84	136.76	136.70	136.38	136.14	136.68	136.94	136.74
23	136.88	137.20	137.08	137.16	136.82	136.74	136.69	136.36	136.16	136.78	136.94	136.80
24	136.86	137.20	137.08	137.14	136.78	136.78	136.68	136.35	136.18	136.88	136.92	137.00
25	136.85	137.18	137.08	137.12	136.76	136.76	136.67	136.32	136.20	136.90	136.90	137.10
26	136.84	137.18	137.07	137.10	136.75	136.76	136.66	136.30	136.18	136.88	136.89	137.12
27	136.83	137.17	137.06	137.09	136.74	136.76	136.65	136.29	136.17	136.88	136.94	137.10
28	136.82	137.18	137.06	137.08	136.74	136.75	136.64	136.28	136.16	136.88	136.93	137.10
29	136.82	137.16	137.05	137.06	---	136.74	136.62	136.30	136.24	136.86	136.92	137.08
30	136.80	137.14	137.04	137.05	---	136.73	136.64	136.30	136.26	136.94	136.90	137.06
31	136.80	---	137.04	137.04	---	136.72	---	136.28	---	136.94	136.88	---
MEAN	136.94	136.92	137.09	137.02	136.89	136.81	136.70	136.48	136.16	136.67	136.89	136.90
MAX	137.12	137.20	137.14	137.16	137.02	136.92	136.78	136.68	136.26	136.94	136.95	137.12
MIN	136.80	136.78	137.04	136.92	136.74	136.72	136.62	136.28	136.06	136.44	136.80	136.74

CAL YR 1988 MEAN 136.88 MAX 137.64 MIN 136.26
WTR YR 1989 MEAN 136.79 MAX 137.20 MIN 136.06

PEACE RIVER BASIN

02294303 ARIANA LAKE AT AUBURNDALE, FL

LOCATION.--Lat 28°05'16", long 81°47'41", in SE¼ sec.34, T.27 S., R.25 E., Polk County, Hydrologic Unit 03100101, on north shore of lake, 1,650 ft west of State Highway 559, and 1.7 mi north of Auburndale.

SURFACE AREA.--1,019 acres (1.59 mi^2).

DRAINAGE AREA.--7.86 mi^2.

PERIOD OF RECORD.--June 1945 to January 1948 (weekly), incomplete; February 1958 to February 1960 (fragmentary); November 1971 to current year (twice weekly), incomplete. Records of elevations prior to November 1971 are unpublished and available in files of the Orlando Subdistrict office.

REVISED RECORDS.--WDR FL-80-3: Drainage area.

GAGE.--Nonrecording gage. Datum of gage is 100.00 ft above National Geodetic Vertical Datum of 1929 (levels by Southwest Florida Water Management District); gage readings have been reduced to elevations above NGVD. Prior to Mar. 18, 1975, at site 1,000 ft east at datum 31.90 ft higher.

REMARKS.--Lake is in Saddle Creek Branch area of Peace River headwaters.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation observed, 137.90 ft, Aug. 28, 1946; minimum observed, 131.28 ft, May 6, 1976.

EXTREMES FOR CURRENT YEAR.--Maximum elevation observed, 135.69 ft, Jan. 23,27; minimum observed, 134.51 ft, June 12.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
INSTANT VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	135.19	---	---	---	134.90
2	---	---	135.55	135.53	---	---	---	---	134.65	---	---	---
3	135.65	---	---	---	135.65	135.55	135.35	---	---	134.81	---	---
4	---	135.31	---	---	---	---	---	---	---	---	135.04	134.88
5	---	---	135.53	---	---	---	---	135.17	134.59	---	---	---
6	---	---	---	135.51	135.63	135.57	---	---	---	---	---	---
7	135.55	135.33	---	---	---	---	135.31	---	---	134.85	134.96	---
8	---	---	---	---	---	---	---	135.11	---	---	---	134.90
9	---	---	135.47	135.49	---	---	---	---	134.53	---	---	---
10	135.47	---	---	---	135.61	135.51	135.29	---	---	134.81	---	---
11	---	135.27	---	---	---	---	---	---	---	134.79	134.90	134.86
12	135.46	---	135.61	---	---	---	---	135.05	134.51	---	---	---
13	---	---	---	135.49	135.59	135.47	---	---	---	---	---	---
14	135.41	135.25	---	---	---	---	135.25	---	---	134.83	134.88	---
15	---	---	---	---	---	---	---	134.95	---	---	---	134.82
16	---	---	135.55	135.49	---	---	---	---	134.53	---	---	---
17	135.35	---	---	---	135.55	135.45	135.25	---	---	134.81	---	---
18	---	135.23	---	---	---	---	---	---	---	---	134.80	134.80
19	---	---	135.55	---	---	---	---	134.91	134.53	---	---	---
20	---	---	---	135.45	135.53	135.43	---	---	---	---	---	---
21	135.33	135.21	---	---	---	---	135.31	---	---	134.77	134.90	---
22	---	---	---	---	---	---	---	134.85	---	---	---	134.80
23	---	---	135.53	135.69	---	---	---	---	---	---	---	---
24	135.31	---	---	---	135.47	135.45	135.21	---	134.55	134.97	---	---
25	---	135.51	---	---	---	---	---	---	---	---	134.88	135.22
26	---	---	135.53	---	---	---	---	---	134.55	---	---	---
27	---	---	---	135.69	135.45	135.43	---	---	---	---	---	---
28	---	135.59	---	---	---	---	135.17	---	---	134.95	134.92	---
29	135.25	---	---	---	---	---	---	134.75	---	---	---	135.30
30	---	---	135.53	135.65	---	---	---	---	134.55	---	---	---
31	135.23	---	---	---	---	135.40	---	---	---	135.05	---	---

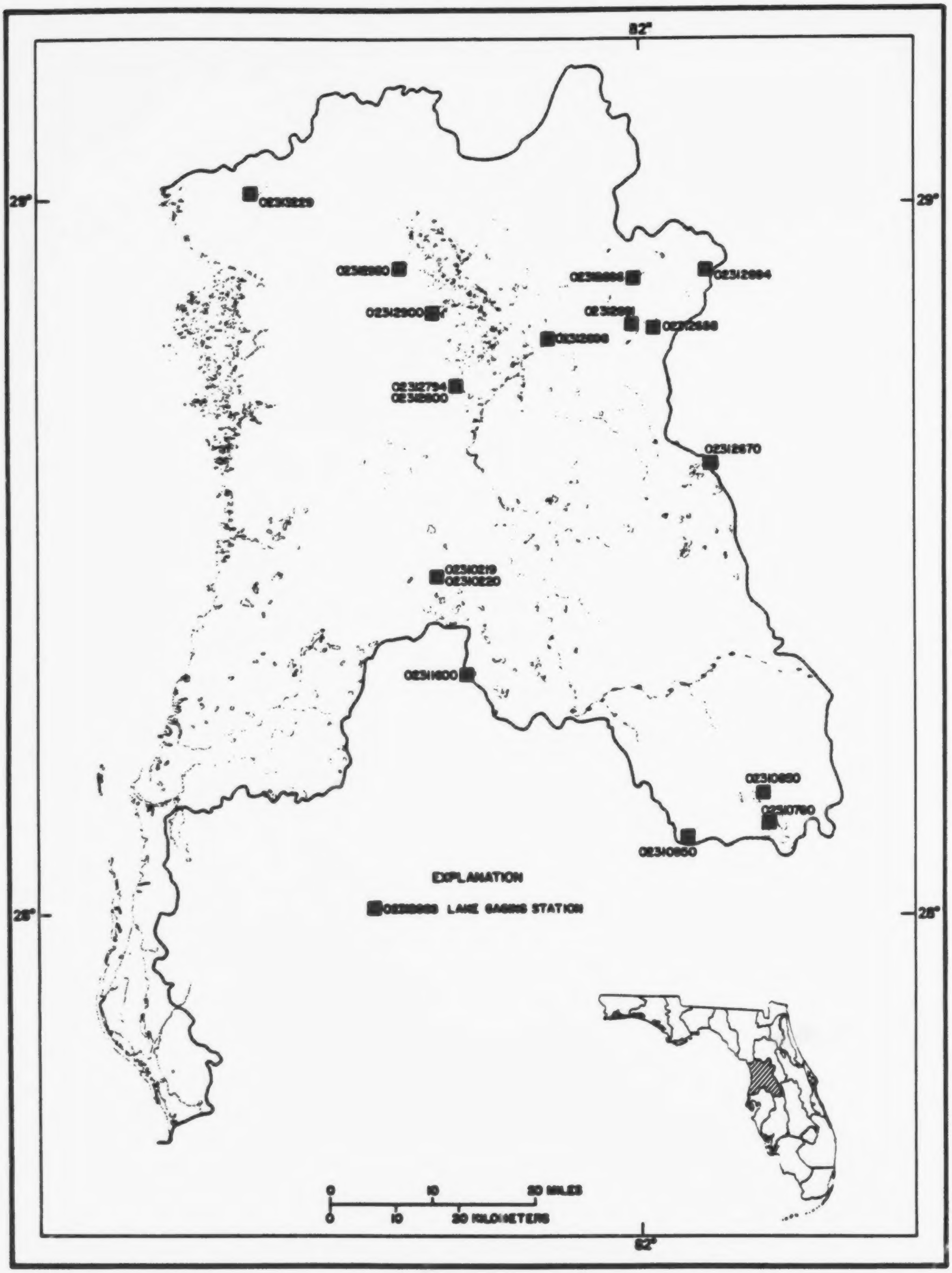
82°
29°
29°
02312900
02312694
02312794
02312800
02312670
02310219
02310220
02311000
02310850
02310780
02310860
EXPLANATION
LAKE GAGING STATION
28°
28°
0
10
20 MILES
0
10
20 KILOMETERS
82°

Figure 29.--Location of lake gaging stations in the Withlacoochee River basin and coastal areas.

02310219 NEFF LAKE SINK NEAR BROOKSVILLE, FL

LOCATION.--Lat 28°28'44", long 82°19'14", in SE¼ sec.17, T.23 S., R.20 E., Hernando County, Hydrologic Unit 03100207, in diked sinkhole area, at fish camp on east shore of lake, 6.3 mi southeast of Brooksville, and 9.0 mi east of Masaryktown.

DRAINAGE AREA.--5.08 mi^2.

PERIOD OF RECORD.--June 1971 to December 1974 (twice weekly), incomplete; January 1975 to current year (fragmentary). Records equivalent to Neff Lake since January 1965, except during extreme low water when dike separates sink from lake.

GAGE.--Nonrecording gage. Datum of gage is 88.00 ft above National Geodetic Vertical Datum of 1929; gage readings have been reduced to elevations above NGVD. Prior to Jan. 29, 1985 at datum 2.00 ft higher.

REMARKS.--Sink is isolated from Neff Lake by an earthen dike below elevation of 86.6 ft.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation observed, 104.11 ft, Mar. 22, 1984; sink dry for many days in 1969, 1972-74.

ELEVATION, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	ELEVATION ABOVE NGVD (FEET)	DATE	TIME	ELEVATION ABOVE NGVD (FEET)
OCT			MAY		
04...	0725	101.48	09...	0735	99.77
NOV			JUL		
22...	0720	101.51	06...	0740	99.59
JAN			AUG		
24...	0710	101.59	29...	0720	99.04
MAR					
21...	0730	101.75			

COASTAL AREA FROM TAMPA BAY TO WITHLACOOCHEE RIVER

02310220 NEFF LAKE NEAR BROOKSVILLE, FL

LOCATION.--Lat 28°28'44", long 82°19'14", in SE¼ sec.17, T.23 S., R.20 E., Hernando County, Hydrologic Unit 03100207, on east shore of lake, 6.3 mi southeast of Brooksville, and 9.0 mi east of Masaryktown.

SURFACE AREA.--224 acres (0.35 mi^2).

DRAINAGE AREA.--5.08 mi^2.

PERIOD OF RECORD.--January 1965 to March 1968 (twice weekly), incomplete; April 1968 to January 1970 (fragmentary); February 1970 to December 1974 (twice weekly), incomplete; January 1975 to current year (fragmentary). Records equivalent to Neff Lake Sink since January 1965, except during extreme low water.

GAGE.--Nonrecording gage. Datum of gage is 88.00 ft above National Geodetic Vertical Datum of 1929; gage readings have been reduced to elevations above NGVD. Prior to Jan. 29, 1985 at site 300 ft northwest at datum 2.00 ft higher.

REMARKS.--Lake is interconnected with Mountain Lake during extreme high-water periods. Some outflow through sinkhole on east shore of lake; lake is isolated from sink by an earthen dike below elevation of 86.6 ft.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation observed, 104.11 ft, Mar. 22, 1984; lake dry for most of period May 1968 to September 1969.

ELEVATION, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	ELEVATION ABOVE NGVD (FEET)	DATE	TIME	ELEVATION ABOVE NGVD (FEET)
OCT			MAY		
04...	0725	101.48	09...	0735	99.77
NOV			JUL		
22...	0720	101.51	06...	0740	99.59
JAN			AUG		
24...	0710	101.59	29...	0720	99.04
MAR					
21...	0730	101.75			

WITHLACOOCHEE RIVER BASIN

02310760 LAKE JULIANA NEAR POLK CITY, FL

LOCATION.--Lat 28°07'51", long 81°47'45", in SE¼ sec.15, T.27 S., R.25 E., Polk County, Hydrologic Unit 03100208, on east shore of lake, near concrete-walled pumping station, 4 mi southeast of Polk City.

SURFACE AREA.--919 acres (1.44 mi^2).

DRAINAGE AREA.--5.4 mi^2, approximately.

PERIOD OF RECORD.--December 1961 to September 1975 (once-daily); October 1975 to current year (weekly), incomplete.

GAGE.--Nonrecording gage. Datum of gage is 100.00 ft above National Geodetic Vertical Datum of 1929; gage readings have been reduced to elevations above NGVD. Prior to June 8, 1984, at datum 26.49 ft higher.

REMARKS.--Lake is one of a group of lakes in the southern part of an extensive area of swampy flatlands and sandy ridges at a relatively high elevation, called the Green Swamp. Streams that flow into five major drainage systems originate in or near the Green Swamp area. Lake is connected to Lake Mattie by a canal which tends to equalize the lake elevations.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation observed, 132.92 ft, Mar. 12, 1970; minimum observed, 126.20 ft, May 7,14, 1976.

EXTREMES FOR CURRENT YEAR.--Maximum elevation observed, 132.01 ft, Jan. 28; minimum observed, 130.73 ft, Sept. 15.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
INSTANT VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	131.65	---	---	131.70	---	---	---	---	---	---	---	---
2	---	---	131.68	---	---	---	---	---	---	---	---	130.82
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	131.89	131.68	---	---	---	131.05	---	---
5	---	---	---	---	---	---	---	131.22	---	---	131.09	---
6	---	131.42	---	---	---	---	---	---	---	---	---	---
7	131.61	---	---	131.67	---	---	---	---	---	---	---	130.83
8	---	---	---	---	---	---	131.43	---	130.84	---	---	---
9	---	---	---	---	---	---	---	---	---	---	131.04	130.82
10	---	---	---	---	---	---	---	---	---	131.08	---	---
11	---	---	---	---	131.77	131.64	---	---	---	131.04	130.98	---
12	131.51	---	---	---	---	---	---	---	---	---	---	---
13	---	131.36	---	---	---	---	---	131.04	---	---	130.94	---
14	---	---	---	131.66	---	---	131.34	---	---	---	---	---
15	131.46	---	---	---	---	---	---	---	---	---	---	130.73
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	131.78	---	---	---	---	---	130.81	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	131.32	---	---	131.69	131.58	---	---	---	130.99	---	---
20	---	---	---	---	---	---	---	130.90	---	---	130.93	---
21	---	---	---	---	---	---	131.33	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	131.37	---	---	---	---	---	---	---	130.84	---	---	130.94
24	---	---	131.76	---	---	131.56	---	---	---	---	---	---
25	---	---	---	---	---	131.57	---	---	---	131.15	---	---
26	---	---	---	---	131.59	---	---	---	---	---	130.86	---
27	---	---	---	131.90	---	---	---	---	---	---	---	---
28	---	---	---	132.01	---	---	131.23	---	---	---	---	---
29	---	131.77	---	---	---	---	---	---	130.88	131.08	---	---
30	---	---	---	---	---	---	---	---	---	---	---	131.11
31	131.29	---	---	---	---	131.46	---	130.98	---	---	---	---

WITHLACOOCHEE RIVER BASIN

02310850 LAKE HELENE NEAR POLK CITY, FL

LOCATION.--Lat 28°10'25", long 81°48'21", in SW¼ sec.34, T.26 S., R.25 E., Polk County, Hydrologic Unit 03100208, on west shore of lake, on private pier at Camp Gilead, 1.3 mi southeast of Polk City.

SURFACE AREA.--54.4 acres (0.08 mi^2), at elevation 140.6 ft above NGVD.

DRAINAGE AREA.--0.42 mi^2.

PERIOD OF RECORD.--March 1961 to April 1965; May 1965 to current year (twice weekly), incomplete.

REVISED RECORDS.--WRD FL 1962: Surface area.

GAGE.--Nonrecording gage. Datum of gage is 100.00 ft above National Geodetic Vertical Datum of 1929; gage readings have been reduced to elevations above NGVD. Prior to Oct. 19, 1961, nonrecording gage, Oct. 19, 1961 to Apr. 13, 1965, water-stage recorder and since Apr. 13, 1965, nonrecording gage at same site at different datums.

REMARKS.--Lake is one of a group of lakes in the southern part of an extensive area of swampy flatlands and sandy ridges at a relatively high elevation, called the Green Swamp. Streams that flow into five major drainage systems originate in or near the Green Swamp area. Lake is landlocked.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation observed, 145.86 ft, Apr. 5,9, 1984; minimum observed, 138.54 ft, May 11, 1968.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum elevation since 1948, 148.5 ft in September 1960, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Maximum elevation observed, 143.56 ft, Jan. 23,25,27,31, Feb.3; minimum observed, 142.12 ft, June 16.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
INSTANT VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	143.23	---	142.78	---	---	---	142.68
2	---	---	143.40	143.42	---	---	---	---	142.32	---	142.92	---
3	143.18	142.78	---	---	143.56	---	143.06	---	---	---	---	---
4	---	---	143.38	143.40	---	143.30	---	142.74	---	142.48	142.92	142.82
5	143.18	142.88	---	---	---	---	143.08	142.72	142.24	---	---	---
6	---	---	---	143.38	143.54	143.34	---	---	---	142.46	---	142.82
7	143.18	142.92	143.38	---	---	---	143.04	---	142.20	---	142.89	---
8	---	---	---	---	---	---	---	142.66	---	142.46	---	142.80
9	---	142.90	143.38	143.37	143.52	---	---	---	142.24	---	---	---
10	143.10	---	---	---	143.50	143.28	142.98	142.58	---	142.45	142.84	---
11	---	142.88	---	143.36	---	---	---	---	---	142.39	142.82	142.76
12	143.08	---	143.46	---	---	---	142.92	142.54	142.18	142.58	---	---
13	---	---	---	143.36	143.44	143.26	---	---	---	---	---	142.72
14	---	142.90	143.44	---	---	---	142.92	---	142.18	142.54	142.78	---
15	---	---	---	---	143.42	143.24	---	142.48	---	---	---	142.70
16	---	142.86	143.46	143.36	---	---	---	---	142.12	---	---	---
17	142.98	---	---	---	143.40	143.25	142.90	142.46	---	142.64	142.74	---
18	---	142.80	---	143.34	---	---	---	---	---	---	142.72	142.68
19	142.98	---	143.42	---	---	---	142.88	142.42	142.20	142.62	---	---
20	---	---	---	143.30	143.38	143.22	---	---	---	---	---	142.70
21	142.96	142.79	143.40	---	---	---	142.86	---	142.18	142.60	142.72	---
22	---	---	---	---	143.38	---	---	142.36	---	---	---	142.66
23	---	143.40	143.42	143.56	---	143.16	---	---	142.22	---	142.70	---
24	142.92	---	---	---	---	143.19	142.80	142.30	---	142.75	---	---
25	---	143.40	---	143.56	---	143.18	---	---	---	---	142.68	142.94
26	142.88	---	143.42	---	---	---	142.77	142.28	142.38	142.76	142.66	---
27	---	---	---	143.56	143.24	143.16	---	---	---	---	---	143.02
28	142.86	143.42	---	---	---	---	142.74	---	142.34	142.74	142.64	---
29	---	---	143.42	---	---	143.12	---	142.34	---	---	---	143.00
30	---	143.42	143.42	---	---	---	---	---	142.48	---	142.60	---
31	142.84	---	---	143.56	---	143.12	---	142.34	---	142.84	---	---

WITHLACOOCHEE RIVER BASIN

02310950 LAKE DEESON NEAR LAKELAND, FL

LOCATION.--Lat 28°06'37", long 81°55'51", in NW¼ sec.29, T.27 S., R.24 E., Polk County, Hydrologic Unit 03100208, on south shore of lake, 5.0 mi northeast of intersection of U.S. Highways 92 and 98 in Lakeland.

SURFACE AREA.--116 acres (0.18 mi^2).

DRAINAGE AREA.--0.96 mi^2.

PERIOD OF RECORD.--July 1954 to March 1960 (fragmentary); May 1965 to current year. Records of elevations prior to May 1965 are unpublished and available in files of the Orlando Subdistrict office.

GAGE.--Water-stage recorder. Datum of gage is 118.21 ft above National Geodetic Vertical Datum of 1929; gage readings have been reduced to elevations above NGVD. Prior to Oct. 17, 1957, nonrecording gage at same site at datum 20.25 ft higher and Oct. 17, 1957 to March 1960, at datum 20.79 ft higher.

REMARKS.--Lake is landlocked except at extreme high stages when flow is to the northeast to the headwaters of Gator Creek. Since Dec. 14, 1973, elevation of lake affected by pumpage into lake from nearby deep well.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation observed, 135.49 ft, Sept. 28, 1954; minimum daily, 119.81 ft, May 24, 1968.

EXTREMES FOR CURRENT YEAR.--Maximum daily elevation, 128.26 ft, Jan. 23,24,26-31; minimum daily, 126.07 ft, June 15,16.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	127.00	126.84	127.83	127.97	128.25	127.88	127.57	127.19	126.31	126.36	126.84	126.80
2	127.00	126.83	127.83	127.97	128.25	127.95	127.54	127.20	126.28	126.35	126.84	126.82
3	127.12	126.82	127.82	127.97	128.23	127.97	127.51	127.18	126.24	126.35	126.84	126.82
4	127.13	126.92	127.82	127.96	128.22	127.97	127.51	127.15	126.20	126.33	126.83	126.84
5	127.12	126.96	127.82	127.94	128.22	127.97	127.55	127.12	126.18	126.31	126.81	126.83
6	127.11	127.01	127.82	127.93	128.22	127.96	127.52	127.10	126.17	126.28	126.80	126.82
7	127.09	127.00	127.82	127.93	128.21	127.95	127.49	127.06	126.17	126.27	126.78	126.81
8	127.07	126.99	127.83	127.93	128.21	127.94	127.46	127.02	126.27	126.25	126.76	126.79
9	127.06	126.98	127.83	127.92	128.19	127.91	127.44	126.99	126.25	126.21	126.75	126.77
10	127.05	126.97	127.83	127.92	128.17	127.89	127.42	126.96	126.22	126.19	126.77	126.75
11	127.04	126.97	127.88	127.91	128.15	127.87	127.40	126.93	126.19	126.20	126.75	126.73
12	127.03	126.96	127.98	127.91	128.12	127.86	127.37	126.90	126.16	126.30	126.74	126.72
13	127.02	126.95	127.98	127.90	128.11	127.84	127.35	126.86	126.13	126.31	126.75	126.73
14	127.01	126.95	127.98	127.90	128.09	127.83	127.35	126.84	126.10	126.29	126.76	126.71
15	127.00	126.93	127.98	127.89	128.09	127.82	127.35	126.82	126.07	126.27	126.74	126.69
16	126.99	126.93	127.99	127.89	128.08	127.81	127.34	126.79	126.07	126.26	126.72	126.67
17	126.98	126.92	127.99	127.88	128.07	127.80	127.32	126.76	126.13	126.24	126.70	126.65
18	126.98	126.92	127.98	127.87	128.06	127.78	127.30	126.73	126.16	126.22	126.70	126.64
19	126.98	126.90	127.97	127.86	128.04	127.77	127.28	126.70	126.13	126.20	126.73	126.65
20	126.97	126.89	127.97	127.88	128.03	127.75	127.27	126.67	126.10	126.18	126.74	126.63
21	126.96	126.89	127.97	127.99	128.02	127.73	127.25	126.64	126.13	126.16	126.75	126.60
22	126.95	126.93	127.98	128.22	128.01	127.71	127.22	126.61	126.22	126.19	126.73	126.66
23	126.94	127.68	127.98	128.26	127.99	127.70	127.20	126.59	126.21	126.32	126.72	126.86
24	126.93	127.79	127.98	128.26	127.95	127.71	127.18	126.55	126.21	126.35	126.69	126.88
25	126.92	127.80	127.98	128.25	127.92	127.69	127.15	126.52	126.22	126.36	126.74	126.92
26	126.90	127.81	127.98	128.26	127.90	127.67	127.13	126.49	126.20	126.35	126.86	126.97
27	126.89	127.82	127.98	128.26	127.89	127.65	127.10	126.46	126.18	126.33	126.87	126.98
28	126.88	127.83	127.97	128.26	127.88	127.63	127.07	126.43	126.30	126.45	126.86	126.98
29	126.88	127.83	127.98	128.26	---	127.61	127.05	126.40	126.38	126.45	126.84	126.97
30	126.87	127.83	127.98	128.26	---	127.60	127.12	126.37	126.38	126.62	126.83	126.96
31	126.85	---	127.98	128.26	---	127.59	---	126.34	---	126.65	126.81	---
MEAN	126.99	127.16	127.93	128.03	128.09	127.80	127.33	126.79	126.20	126.31	126.78	126.79
MAX	127.13	127.83	127.99	128.26	128.25	127.97	127.57	127.20	126.38	126.65	126.87	126.98
MIN	126.85	126.82	127.82	127.86	127.88	127.59	127.05	126.34	126.07	126.16	126.69	126.60

CAL YR 1988 MEAN 125.72 MAX 127.99 MIN 124.19
WTR YR 1989 MEAN 127.18 MAX 128.26 MIN 126.07

WITHLACOOCHEE RIVER BASIN

02311600 CLEAR LAKE AT SAN ANTONIO, FL

LOCATION.--Lat 28°20'20", long 82°16'02", in SW¼ sec.1, T.25 S., R.20 E., Pasco County, Hydrologic Unit 03100208, on southwest shore of lake, on public pier, 0.5 mi northeast of San Antonio, and 5.0 mi west of Dade City.

SURFACE AREA.--158 acres (0.25 mi^2).

DRAINAGE AREA.--0.92 mi^2.

PERIOD OF RECORD.--January 1965 to September 1966 (twice-weekly), incomplete; October 1966 to current year (weekly), incomplete.

GAGE.--Nonrecording gage. Datum of gage is 97.00 ft above National Geodetic Vertical Datum of 1929 (Florida Department of Transportation bench mark); gage readings have been reduced to elevations above NGVD. Prior to Mar. 31, 1971, at site 30 ft northwest at same datum.

REMARKS.--Lake has no surface outlet.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation observed, 127.86 ft, Apr. 4, 1987; minimum observed, 123.52 ft, May 6, 1968.

EXTREMES FOR CURRENT YEAR.--Maximum elevation observed, 127.36 ft, Nov. 25; minimum observed, 125.86 ft, June 4.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
INSTANT VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	126.44	---	---
2	127.04	---	---	---	---	---	126.44	---	---	---	---	---
3	---	---	---	---	---	126.68	---	---	---	---	---	---
4	127.03	---	127.04	---	126.60	---	---	---	125.86	---	---	126.34
5	---	126.60	---	---	---	---	---	---	---	---	126.30	---
6	---	---	---	---	---	---	---	---	---	126.47	---	---
7	---	---	---	126.78	---	---	---	126.26	---	---	---	---
8	---	---	---	---	---	---	126.54	---	---	126.44	---	---
9	126.82	---	127.00	---	---	---	---	126.27	---	---	---	126.28
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	126.74	---	---	---	125.98	---	---	---
12	---	---	---	---	---	126.60	---	---	---	---	126.32	---
13	---	126.58	---	---	---	---	---	126.18	---	---	---	---
14	---	---	---	126.76	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	126.32	---	---
16	126.66	---	---	---	---	---	126.52	---	---	---	---	126.18
17	---	---	126.94	---	---	---	---	---	---	---	---	---
18	---	---	---	---	126.64	126.58	---	---	125.90	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	126.52	---	---	---	---	---	---	---	---	126.20	---
21	---	---	---	---	---	126.55	---	126.00	---	---	---	---
22	126.64	126.50	---	127.00	---	---	126.46	---	---	126.24	---	---
23	---	---	---	---	---	---	---	---	---	---	---	126.14
24	---	---	126.86	126.98	---	---	---	---	126.06	---	---	---
25	---	127.36	---	---	126.60	126.56	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	126.30	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	126.90	---	---	---	125.90	---	---	---	---
29	126.52	---	---	---	---	---	126.36	---	---	126.38	126.29	---
30	---	---	---	---	---	---	---	---	---	---	---	126.16
31	---	---	126.86	---	---	---	---	---	---	---	---	---

02312670 LAKE CATHERINE AT GROVELAND, FL

LOCATION.--Lat 28°34'27", long 81°51'37", in NE¼ sec.13, T.22 S., R.24 E., Lake County, Hydrologic Unit 03100208, on northeast shore of lake, 0.3 mi west of State Highway 19, and 1.0 mi northwest of Groveland.

SURFACE AREA.--137 acres (0.21 mi^2).

DRAINAGE AREA.--4.53 mi^2.

PERIOD OF RECORD.--September 1965 to current year (weekly), incomplete.

REVISED RECORDS.--WDR FL-71-3: Surface area, drainage area.

GAGE.--Nonrecording gage. Datum of gage is 87.09 ft above National Geodetic Vertical Datum of 1929; gage readings have been reduced to elevations above NGVD.

REMARKS.--Lake has no surface outlet. Elevations affected occasionally by pumpage out of lake or inflow into lake from citrus canning plant.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation observed, 99.76 ft, Sept. 15, 1988; minimum observed, 97.25 ft, May 4,11, 1968.

EXTREMES FOR CURRENT YEAR.--Maximum elevation observed, 98.97 ft, Oct. 6; minimum observed, 97.87 ft, May 31.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
INSTANT VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	98.09	---	---	98.49	98.23	---	---	---	---	---	---
2	---	98.13	---	---	---	---	---	---	---	---	98.19	---
3	---	---	---	---	---	---	---	98.05	---	---	---	---
4	---	---	---	98.20	---	---	---	---	---	---	---	98.25
5	---	---	---	---	---	---	98.15	---	---	98.24	---	---
6	98.97	---	---	---	---	---	---	---	---	---	---	---
7	---	---	98.27	---	---	---	---	---	97.97	---	---	---
8	---	---	---	---	98.46	98.27	---	---	---	---	---	---
9	---	98.04	---	---	---	---	---	---	---	---	98.05	---
10	---	---	---	---	---	---	---	97.95	---	---	---	---
11	---	---	---	98.17	---	---	---	---	---	---	---	98.19
12	---	---	---	---	---	---	98.09	---	---	98.21	---	---
13	98.67	---	---	---	---	---	---	---	---	---	---	98.15
14	---	---	98.37	---	---	---	97.99	---	97.95	---	---	---
15	---	---	---	---	98.37	98.17	---	---	---	---	---	---
16	---	97.95	---	---	---	---	---	---	97.96	---	98.13	---
17	---	---	---	---	98.34	---	---	97.95	---	---	---	---
18	---	---	---	98.11	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	98.21	---	---	98.14	---	---
20	98.39	---	---	---	---	---	---	---	---	---	---	98.03
21	---	---	98.31	---	---	---	---	---	97.95	---	---	---
22	---	---	98.31	---	---	98.13	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	98.11	---
24	---	98.43	---	---	---	---	---	97.89	---	---	---	---
25	---	---	---	98.53	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	98.09	---	---	98.31	---	---
27	98.19	---	---	---	98.33	---	---	---	---	---	---	98.30
28	---	---	98.25	---	---	---	---	---	98.07	---	---	---
29	---	---	---	---	---	98.05	---	---	---	---	---	---
30	---	98.39	---	---	---	---	---	---	---	---	98.13	---
31	---	---	---	---	---	---	---	97.87	---	98.11	---	---

WITHLACOOCHEE RIVER BASIN

02312688 LAKE DEATON NEAR WILDWOOD, FL

LOCATION.--Lat 28°49'42", long 81°58'51", in NW¼ sec.23, T.19 S., R.23 E., Sumter County, Hydrologic Unit 03100208, on south side of lake on private pier, 0.3 mi northwest of junction of State Highways 44 and 44A, and 4.3 mi southeast of Wildwood.

SURFACE AREA.--782 acres (1.2 mi^2).

DRAINAGE AREA.--12.4 mi^2.

PERIOD OF RECORD.--April 1978 to current year (weekly), incomplete.

GAGE.--Nonrecording gage. Datum of gage is National Geodetic Vertical Datum of 1929 (National Oceanic and Atmospheric Administration bench mark).

REMARKS.--There is some pumpage from lake for irrigation purposes.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation observed, 65.28 ft, June 1, July 6, Aug. 3, 1984; minimum observed, 60.90 ft, Dec. 18, 1981.

EXTREMES FOR CURRENT YEAR.--Maximum elevation observed, 64.94 ft, Sept. 1; minimum observed, 63.14 ft, June 16.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
INSTANT VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	---	64.94
2	---	---	64.16	---	---	---	---	---	63.34	---	---	---
3	---	---	---	---	64.12	63.92	---	---	---	---	---	---
4	---	63.96	---	---	---	---	---	---	---	---	64.71	---
5	---	---	---	---	---	---	---	63.50	---	---	---	---
6	---	---	---	63.92	---	---	---	---	---	---	---	---
7	64.23	---	---	---	64.10	---	63.78	---	---	63.86	---	---
8	---	---	---	---	---	---	---	---	---	---	---	64.87
9	---	---	64.12	---	---	---	---	---	63.22	---	---	---
10	---	---	---	---	63.92	63.96	---	---	---	---	---	---
11	---	63.96	---	---	---	---	---	---	---	---	64.56	---
12	---	---	---	---	---	---	---	63.54	---	---	---	---
13	---	---	---	63.92	---	---	---	---	---	---	---	---
14	64.16	---	---	---	---	---	63.82	---	---	64.45	---	64.65
15	---	---	---	---	---	---	---	---	---	---	---	64.72
16	---	---	64.14	---	---	---	---	---	63.14	---	---	---
17	64.12	---	---	---	63.72	63.92	---	---	---	---	---	---
18	---	63.93	---	---	---	---	---	---	---	---	64.66	---
19	---	---	---	---	---	---	---	63.35	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	64.14	---	---	---	---	---	63.46	---	---	64.30	---	---
22	---	---	---	---	---	---	---	---	---	---	---	64.74
23	---	---	64.15	---	---	---	---	---	---	---	---	---
24	---	---	---	64.06	63.71	63.92	---	63.26	63.44	---	---	---
25	---	64.15	---	---	---	---	---	---	---	---	64.74	---
26	---	---	---	---	---	---	---	63.26	---	---	---	---
27	---	---	---	64.14	---	---	---	---	---	---	---	---
28	63.99	---	---	---	---	63.83	63.44	---	---	64.44	---	---
29	---	---	---	---	---	---	---	---	---	---	---	64.72
30	---	---	64.06	---	---	---	---	---	63.92	---	---	---
31	---	---	---	---	---	63.91	---	---	---	---	---	---

WITHLACOOCHEE RIVER BASIN

02312691 LAKE OKAHUMPKA NEAR WILDWOOD, FL

LOCATION.--Lat 28°49'45", long 82°00'06", in SW¼ sec.15, T.19 S., R.23 E., Sumter County, Hydrologic Unit 03100208, on northeast side of lake on public pier, 1.5 mi west of junction of State Highways 44 and 44A, and 3.2 mi southeast of Wildwood.

SURFACE AREA.--973 acres (1.5 mi²).

DRAINAGE AREA.--49 mi², approximately, of which 5 mi² probably is noncontributing.

PERIOD OF RECORD.--April 1978 to current year (weekly).

REVISED RECORDS.--WDR FL-88-1A: 1986, 1987.

GAGE.--Nonrecording gage. Datum of gage is National Geodetic Vertical Datum of 1929 (Southwest Florida Water Management District bench mark).

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation observed, 59.00 ft, July 10, 1982; minimum observed, 55.28 ft, July 10, Dec. 11,18,26, 1981.

EXTREMES FOR CURRENT YEAR.--Maximum elevation observed, 58.20 ft, Aug. 18; minimum observed, 56.75 ft, June 16.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
INSTANT VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	---	57.85
2	---	---	57.48	---	---	---	---	---	56.85	---	---	---
3	---	---	---	---	57.62	57.58	---	---	---	---	---	---
4	---	57.19	---	---	---	---	---	---	---	---	58.05	---
5	---	---	---	---	---	---	---	57.30	---	---	---	---
6	---	---	---	57.45	---	---	---	---	---	---	---	---
7	57.54	---	---	---	57.60	---	57.45	---	---	57.52	---	---
8	---	---	---	---	---	---	---	---	---	---	---	57.90
9	---	---	57.45	---	---	---	---	---	56.90	---	---	---
10	---	---	---	---	57.50	57.50	---	---	---	---	---	---
11	---	57.19	---	---	---	---	---	---	---	---	58.00	---
12	---	---	---	---	---	---	---	57.20	---	---	---	---
13	---	---	---	57.47	---	---	---	---	---	---	---	---
14	57.39	---	---	---	---	---	57.35	---	---	57.60	---	57.94
15	---	---	---	---	---	---	---	---	---	---	---	57.75
16	---	---	57.52	---	---	---	---	---	56.75	---	---	---
17	57.38	---	---	---	57.48	57.48	---	---	---	---	---	---
18	---	57.19	---	---	---	---	---	---	---	---	58.20	---
19	---	---	---	---	---	---	---	57.05	---	---	---	---
20	---	---	---	57.40	---	---	---	---	---	---	---	---
21	57.34	---	---	---	---	---	57.45	---	---	57.65	---	---
22	---	---	---	---	---	---	---	---	---	---	---	57.78
23	---	---	57.52	---	---	---	---	---	57.10	---	---	---
24	---	---	---	---	57.48	57.40	---	---	---	---	---	---
25	---	57.44	---	---	---	---	---	---	---	---	57.90	---
26	---	---	---	---	---	---	---	56.92	---	---	---	---
27	---	---	---	57.65	---	---	---	---	---	---	---	---
28	57.24	---	---	---	---	57.40	57.30	---	---	57.70	---	---
29	---	---	---	---	---	---	---	---	---	---	---	57.90
30	---	---	57.55	---	---	---	---	---	57.35	---	---	---
31	---	---	---	---	---	57.35	---	---	---	---	---	---

WITHLACOOCHEE RIVER BASIN

02312694 LADY LAKE NEAR LADY LAKE, FL

LOCATION.--Lat 28°54'50", long 81°53'43", in NE¼ sec.22, T.18 S., R.24 E., Lake County, Hydrologic Unit 03100208, on south shore of lake, 1.5 mi east of town of Lady Lake.

SURFACE AREA.--190 acres (0.30 mi^2).

DRAINAGE AREA.--4.67 mi^2.

PERIOD OF RECORD.--February 1970 to September 1973 (weekly); October 1973 to current year (fragmentary).

REVISED RECORDS.--WDR FL-72-3: Drainage area, surface area.

GAGE.--Nonrecording gage. Datum of gage is National Geodetic Vertical Datum of 1929.

REMARKS.--Lake is landlocked. There is some pumpage from lake for irrigation purposes.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation observed, 66.60 ft, Apr. 16, 1984; minimum observed, 60.70 ft, Apr. 15, 1976.

ELEVATION, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	ELEVATION ABOVE NGVD (FEET)	DATE	TIME	ELEVATION ABOVE NGVD (FEET)
OCT			JUN		
31...	1335	61.61	05...	1510	60.74
DEC			AUG		
20...	1310	61.71	04...	1302	61.33
FEB			SEP		
13...	1535	61.53	25...	1305	61.08
APR					
10...	1150	61.29			

02312696 LAKE MIONA NEAR OXFORD, FL

LOCATION.--Lat 28°54'21", long 82°00'19", in SE¼ sec.21, T.18 S., R.23 E., Sumter County, Hydrologic Unit 03100208, on north side of lake on private pier, 2.5 mi southeast of Oxford, and 3.7 mi northeast of Wildwood.

SURFACE AREA.--800 acres (1.2 mi^2), includes Black Lake but excludes Cherry Lake.

DRAINAGE AREA.--38 mi^2, approximately, of which 10 mi^2 probably is noncontributing.

PERIOD OF RECORD.--April 1978 to current year (weekly), incomplete.

GAGE.--Nonrecording gage. Datum of gage is National Geodetic Vertical Datum of 1929.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation observed, 56.60 ft, Oct. 1, 1982; minimum observed, 49.74 ft, May 4, 1979.

EXTREMES FOR CURRENT YEAR.--Maximum elevation observed, 51.65 ft, Oct. 2; minimum observed, 50.19 ft, June 18.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
INSTANT VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	51.33	---	---	---	---	---	---	---	50.63
2	51.65	---	---	---	---	---	50.99	---	---	50.84	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	51.36	---	---	---	---	---	50.29	---	---	---
5	---	---	---	---	51.30	51.27	---	---	---	---	---	---
6	---	51.31	---	---	---	---	---	---	---	---	50.91	---
7	---	---	---	---	51.29	---	---	50.75	---	---	---	---
8	---	---	---	51.27	---	---	---	---	---	---	---	---
9	51.60	---	---	---	---	---	50.94	---	---	50.79	---	---
10	---	---	---	---	---	---	---	---	---	---	---	50.75
11	---	---	51.33	---	---	---	---	---	50.34	---	---	---
12	---	---	---	---	51.19	51.18	---	---	---	---	---	---
13	---	51.26	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	50.58	---	---	---	---
15	---	---	---	51.23	---	---	---	---	---	---	---	---
16	51.50	---	51.40	---	---	---	50.92	---	---	50.84	---	---
17	51.50	---	---	---	---	---	---	---	---	---	---	50.73
18	---	---	51.37	---	---	---	---	---	50.19	---	---	---
19	---	---	---	---	51.13	51.14	---	---	---	---	---	---
20	---	51.17	---	---	---	---	---	---	---	---	50.78	---
21	---	---	---	---	---	---	---	50.42	---	50.90	---	---
22	---	---	---	51.33	---	---	---	---	---	---	---	50.62
23	51.49	---	---	---	---	---	50.85	---	---	50.92	---	---
24	---	---	---	---	---	---	---	---	---	---	---	50.65
25	---	---	51.35	---	---	---	---	---	50.74	---	---	---
26	---	---	---	---	51.06	51.11	---	50.33	---	---	---	---
27	---	51.44	---	---	---	---	---	---	---	---	50.67	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	51.33	---	51.08	---	50.42	---	---	---	---
30	51.33	---	---	---	---	---	---	---	---	50.92	---	50.66
31	---	---	---	---	---	---	---	---	---	---	---	---

WITHLACOOCHEE RIVER BASIN

02312698 LAKE PANASOFFKEE NEAR LAKE PANASOFFKEE, FL

LOCATION.--Lat 28°49'01", long 82°08'40", in SE¼ sec.19, T.19 S., R.22 E., Sumter County, Hydrologic Unit 03100208, on west shore of lake, 0.8 mi north of outlet, 4.6 mi west of Coleman, and 5.1 mi northwest of town of Lake Panasoffkee.

SURFACE AREA.--4,821 acres (7.53 mi^2).

DRAINAGE AREA.--420 mi^2, approximately.

PERIOD OF RECORD.--April 1955 to November 1962 (about weekly); December 1962 to current year. Records of elevations prior to October 1962 are unpublished and available in files of the Orlando Subdistrict office. Records for Outlet River at Panacoochee Retreats (station 02312700).

REVISED RECORDS.--WDR FL-72-3: Drainage area, surface area.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (Florida Department of Transportation bench mark). Prior to Dec. 18, 1962, nonrecording gage and Dec. 18, 1962, to Oct. 7, 1975, water-stage recorder at sites within 0.8 mi south at same datum.

REMARKS.--Outflow from lake is through Outlet River to Withlacoochee River; lake level affected at times by the stage of Withlacoochee River. Prior to 1962, lake level partially controlled during low water by small rock dams and at times during 1962 to 1964 by a temporary sheet piling dam in Outlet River.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation observed (corrected), 44.28 ft, Apr. 5, 1960; minimum observed (corrected), 37.65 ft, May 12, 1962.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	41.22	39.35	39.37	39.90	39.76	39.72	39.33	39.06	38.41	38.62	39.28	39.24
2	41.18	39.32	39.39	39.87	39.77	39.77	39.31	39.01	38.41	38.64	39.27	39.24
3	41.17	39.30	39.40	39.84	39.78	39.81	39.30	38.99	38.40	38.67	39.25	39.27
4	41.19	39.28	39.43	39.80	39.78	39.81	39.29	38.97	38.40	38.66	39.24	39.28
5	41.15	39.26	39.47	39.81	39.79	39.80	39.28	38.93	38.39	38.67	39.21	39.28
6	41.07	39.24	39.51	39.80	39.81	39.77	39.26	38.88	38.40	38.69	39.18	39.27
7	41.00	39.20	39.55	39.78	39.82	39.74	39.25	38.86	38.41	38.70	39.15	39.27
8	40.93	39.18	39.59	39.76	39.81	39.72	39.23	38.84	38.42	38.70	39.13	39.28
9	40.86	39.15	39.64	39.73	39.81	39.68	39.21	38.83	38.39	38.69	39.12	39.29
10	40.78	39.14	39.68	39.71	39.81	39.66	39.20	38.81	38.37	38.69	39.14	39.29
11	40.72	39.13	39.75	39.69	39.82	39.66	39.18	38.75	38.35	38.68	39.22	39.29
12	40.64	39.10	39.83	39.68	39.82	39.64	39.17	38.73	38.38	38.68	39.25	39.28
13	40.55	39.05	39.88	39.66	39.84	39.63	39.14	38.71	38.34	38.68	39.30	39.26
14	40.48	39.04	39.94	39.65	39.84	39.62	39.12	38.69	38.40	38.68	39.29	39.26
15	40.39	39.02	39.97	39.63	39.84	39.60	39.21	38.67	38.39	38.68	39.28	39.25
16	40.31	39.00	39.99	39.60	39.84	39.59	39.24	38.66	38.38	38.68	39.25	39.27
17	40.23	38.99	39.99	39.58	39.82	39.61	39.25	38.64	38.38	38.69	39.23	39.39
18	40.16	38.97	40.02	39.57	39.80	39.57	39.23	38.64	38.42	38.69	39.22	39.38
19	40.08	38.96	40.04	39.55	39.80	39.55	39.19	38.65	38.43	38.70	39.19	39.37
20	40.02	38.94	40.04	39.53	39.80	39.53	39.17	38.62	38.41	38.72	39.23	39.35
21	39.94	38.93	40.05	39.54	39.80	39.49	39.14	38.62	38.42	38.71	39.26	39.31
22	39.87	38.95	40.05	39.64	39.79	39.48	39.12	38.58	38.41	38.78	39.26	39.31
23	39.81	39.17	40.04	39.69	39.71	39.49	39.10	38.56	38.40	38.83	39.25	39.35
24	39.74	39.28	40.03	39.73	39.72	39.48	39.07	38.55	38.45	38.85	39.23	39.36
25	39.67	39.33	40.01	39.75	39.75	39.47	39.04	38.54	38.50	38.88	39.22	39.39
26	39.62	39.37	39.99	39.75	39.74	39.45	39.01	38.54	38.49	38.87	39.22	39.39
27	39.57	39.37	39.98	39.74	39.74	39.44	38.99	38.51	38.49	38.85	39.27	39.38
28	39.51	39.35	39.96	39.75	39.72	39.42	38.96	38.49	38.48	39.03	39.27	39.40
29	39.45	39.36	39.94	39.75	---	39.40	38.95	38.48	38.53	39.06	39.27	39.39
30	39.40	39.37	39.93	39.75	---	39.38	38.98	38.45	38.56	39.10	39.26	39.37
31	39.39	---	39.91	39.76	---	39.36	---	38.43	---	39.23	39.24	---
MEAN	40.33	39.17	39.82	39.71	39.79	39.59	39.16	38.70	38.42	38.77	39.23	39.32
MAX	41.22	39.37	40.05	39.90	39.84	39.81	39.33	39.06	38.58	39.23	39.30	39.40
MIN	39.39	38.93	39.37	39.53	39.71	39.36	38.95	38.43	38.34	38.62	39.12	39.24

CAL YR 1988 MEAN 40.06 MAX 41.34 MIN 38.74
WTR YR 1989 MEAN 39.33 MAX 41.22 MIN 38.34

WITHLACOOCHEE RIVER BASIN

284753082070401 LAKE PANASOFFKEE NEAR COLEMAN LANDING

WATER-QUALITY RECORDS

LOCATION.--Lat 28°47'53", long 82°07'04", in NE¼ sec.33, T.19 S., R.22 E., Sumter County, Hydrologic Unit 03100208, samples collected from boat, 0.6 mi southwest of Coleman Landing, 2.5 mi west of town of Coleman.

SURFACE AREA.--4,821 acres.

DRAINAGE AREA.--420 mi^2, approximately.

PERIOD OF RECORD.--Water years 1977 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	COLOR (PLAT-INUM-COBALT UNITS) (00080)	OXYGEN, DIS-SOLVED (MG/L) (00300)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)
APR 17...	1300	186	8.1	24.0	5	8.0	77	23	4.7	4.1
SEP 28...	1155	253	7.2	28.0	5	--	120	38	5.0	5.0

DATE	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	NITRO-GEN, NITRITE TOTAL (MG/L AS N) (00615)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N) (00610)
APR 17...	<0.10	43	24	9.9	0.20	4.7	115	<0.010	0.080	<0.010
SEP 28...	0.70	93	22	7.7	0.20	9.7	152	<0.010	0.030	0.010

DATE	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS-PHOROUS TOTAL (MG/L AS P) (00665)	PHOS-PHORUS, ORTHO, TOTAL (MG/L AS P) (70507)	ALUM-INUM, TOTAL RECOV-ERABLE (UG/L AS AL) (01105)	ARSENIC TOTAL (UG/L AS AS) (01002)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD) (01027)	COPPER, DIS-SOLVED (UG/L AS CU) (01040)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE) (01045)	IRON, DIS-SOLVED (UG/L AS FE) (01046)
APR 17...	0.57	0.020	<0.010	60	<1	<1	<1	30	<10
SEP 28...	<0.20	<0.020	<0.010	<10	<1	<1	<1	30	<10

DATE	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB) (01051)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN) (01055)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG) (71900)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI) (01067)	STRON-TIUM, DIS-SOLVED (UG/L AS SR) (01080)	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
APR 17...	<5	<5	<10	<10	<0.10	2	270	<10	6.1
SEP 28...	<1	<1	<10	<10	<0.10	<1	290	<10	1.5

WITHLACOOCHEE RIVER BASIN

02312794 LITTLE LAKE AT FLORAL CITY, FL

LOCATION.--Lat 28°44'51", long 82°17'17", in NE¼ sec.15, T.20 S., R.20 E., Citrus County, Hydrologic Unit 03100208, on north shore of lake, on private pier, 0.6 mi east of Floral City.

SURFACE AREA.--57.6 acres (0.09 mi^2).

DRAINAGE AREA.--1.40 mi^2.

PERIOD OF RECORD.--September 1975 to current year (twice weekly), incomplete.

GAGE.--Nonrecording gage. Datum of gage is National Geodetic Vertical Datum of 1929.

REMARKS.--Outflow from lake is through a canal to Lake Tsala Apopka. Lake level is controlled by culvert with removable boards at State Highway 48; flow is occasionally reversed.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation observed, 42.24 ft, Sept. 26, 1985; minimum observed, 35.04 ft, Nov. 13, 1981.

EXTREMES FOR CURRENT YEAR.--Maximum elevation observed, 41.80 ft, Oct. 4,7,11; minimum observed, 38.34 ft, Sept. 19.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
INSTANT VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	41.00	---	40.98	---	---	---	---	---	---	38.87	38.60
2	---	---	40.86	---	---	---	---	---	---	---	---	---
3	---	---	---	40.91	40.75	40.32	---	---	38.55	---	---	---
4	41.80	40.96	---	---	---	---	39.80	---	---	39.10	38.80	---
5	---	---	---	---	---	---	---	---	---	---	---	38.55
6	---	---	40.86	40.90	---	---	---	---	38.57	---	---	---
7	41.80	---	---	---	40.70	40.30	39.70	---	---	39.05	---	---
8	---	40.90	---	---	---	---	---	---	---	---	38.76	38.58
9	---	---	40.86	---	---	---	---	39.08	38.69	---	---	---
10	---	---	---	40.84	40.62	40.24	---	---	---	---	---	---
11	41.80	---	---	---	---	---	39.65	---	---	38.95	38.68	---
12	---	40.80	---	---	---	---	---	39.07	---	---	---	38.46
13	---	---	40.86	40.80	---	40.19	---	---	38.57	---	---	---
14	41.70	---	---	---	40.50	---	39.55	---	---	38.87	---	---
15	---	40.76	---	---	---	---	---	---	---	---	38.85	---
16	---	---	40.87	---	---	---	---	39.00	38.60	---	---	38.38
17	---	---	---	40.76	40.46	---	---	---	---	---	---	---
18	41.62	40.68	---	---	---	40.11	39.62	---	---	38.76	38.77	---
19	---	---	---	---	---	40.08	---	38.85	---	---	---	38.34
20	---	---	40.90	---	40.40	---	---	---	38.65	---	---	---
21	41.48	---	---	---	---	40.04	---	---	---	---	---	---
22	41.43	40.64	---	---	---	---	---	---	---	38.85	38.78	---
23	---	---	40.90	---	---	---	---	38.77	39.25	---	---	38.40
24	---	---	---	40.86	---	40.05	---	---	---	---	---	---
25	41.30	40.96	---	---	---	---	---	---	---	38.98	38.68	38.54
26	---	---	---	---	40.33	---	---	38.68	---	38.96	---	38.56
27	---	---	41.00	---	---	---	---	---	39.20	---	---	---
28	41.11	---	---	40.80	40.30	39.96	---	---	---	38.90	---	---
29	---	40.90	---	---	---	---	---	---	---	---	38.58	38.76
30	---	---	40.98	---	---	---	---	38.68	39.18	---	---	---
31	---	---	---	40.76	---	39.87	---	---	---	---	---	---

WITHLACOOCHEE RIVER BASIN

02312800 TSALA APOPKA LAKE AT FLORAL CITY, FL

LOCATION.--Lat 28°45'03", long 82°16'49", in NW¼ sec.14, T.20 S., R.20 E., Citrus County, Hydrologic Unit 03100208, at extreme south end of lake, 50 ft northwest of bridge on Duval Road at entrance to The Canal, and 1.0 mi east of Floral City.

SURFACE AREA.--About 19,000 acres (30 mi^2).

DRAINAGE AREA.--Indeterminate.

PERIOD OF RECORD.--July 1957 to April 1958 (weekly), incomplete; August 1958 to September 1975 (once daily); October 1975 (weekly); November 1975 to current year (thrice weekly), incomplete. Records prior to October 1960 are unpublished and available in files of the Orlando Subdistrict office.

GAGE.--Nonrecording gage. Datum of gage is National Geodetic Vertical Datum of 1929. Prior to Apr. 20, 1971, near present site at same datum.

REMARKS.--Tsala Apopka Lake borders along the west bank of the Withlacoochee River and consists of many lakes and sloughs, some connected and some not.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation observed, 44.22 ft, Mar. 29, 1960; minimum observed, 35.24 ft, June 20, 1962.

EXTREMES FOR CURRENT YEAR.--Maximum elevation observed, 41.80 ft, Oct. 5,7; minimum observed, 39.30 ft, June 2.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
INSTANT VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	41.34	41.22	---	40.20	---	---	---	40.08
2	---	40.96	40.88	41.66	---	---	---	---	39.30	---	39.78	---
3	41.70	---	---	---	41.40	41.28	40.54	40.20	---	---	---	---
4	---	40.92	---	41.60	---	---	---	---	---	---	39.76	40.20
5	41.80	---	40.96	---	---	---	40.50	40.10	39.36	---	---	---
6	---	---	---	41.56	41.48	41.18	---	---	39.38	---	---	40.20
7	41.80	40.88	41.00	---	---	---	40.48	---	39.38	---	39.72	---
8	---	---	---	---	41.50	41.16	---	39.90	---	---	---	40.22
9	---	40.80	41.08	41.46	---	---	---	---	39.46	---	39.68	---
10	41.78	---	---	---	41.50	41.10	40.40	40.00	---	---	---	---
11	---	40.78	---	41.40	---	---	---	---	---	---	39.70	40.22
12	41.78	---	41.38	---	---	---	40.38	39.96	39.40	---	---	---
13	---	---	41.42	41.36	41.50	41.00	---	---	---	---	---	40.24
14	41.76	40.78	41.46	---	---	---	40.36	---	39.34	---	39.84	---
15	---	---	---	---	41.52	40.98	---	39.88	---	---	---	40.22
16	---	40.76	41.50	41.28	---	---	---	---	39.36	---	39.86	---
17	41.64	---	---	---	41.48	40.92	40.50	39.80	---	---	---	---
18	---	40.70	---	41.22	---	---	---	---	---	---	39.86	40.24
19	41.52	---	41.54	---	---	---	40.48	39.70	39.38	---	---	---
20	---	---	---	41.16	41.42	40.84	---	---	---	---	---	40.28
21	41.40	40.62	41.62	---	---	---	40.46	---	39.74	---	39.96	---
22	---	---	---	---	41.42	40.78	---	39.60	---	---	---	40.38
23	---	40.94	41.68	41.26	---	---	---	---	---	---	39.98	---
24	41.22	---	---	---	41.32	40.80	40.38	39.56	---	---	---	---
25	---	40.92	---	41.26	---	---	---	---	---	---	40.00	40.56
26	41.16	---	41.70	---	---	---	40.36	39.50	---	39.68	---	---
27	---	---	---	41.26	41.28	40.72	---	---	---	---	---	40.60
28	41.10	40.90	41.70	---	---	---	40.28	---	---	39.68	40.04	---
29	---	---	---	---	---	40.68	---	39.48	---	---	---	40.76
30	---	40.88	41.68	41.30	---	---	---	---	---	---	40.06	---
31	41.00	---	---	---	---	40.62	---	39.46	---	39.72	---	---

WITHLACOOCHEE RIVER BASIN

02312900 TSALA APOPKA LAKE AT INVERNESS, FL

LOCATION.--Lat 28°50'39", long 82°19'21", in SE¼ sec. 8, T.19 S., R.20 E., Citrus County, Hydrologic Unit 03100208, on southwest bank of narrows in west-central section of lake, near southwest end of bridge on State Highway 470, and 0.8 mi northeast of Inverness.

SURFACE AREA.--About 19,000 acres (30 mi^2).

DRAINAGE AREA.--Indeterminate.

PERIOD OF RECORD.--July to December 1957 (weekly), incomplete; August 1958 to September 1975 (once-daily); October 1975 (weekly); November 1975 to current year (thrice weekly), incomplete. Records prior to October 1960 are unpublished and available in files of the Orlando Subdistrict office.

GAGE.--Nonrecording gage. Datum of gage is National Geodetic Vertical Datum of 1929. Prior to Aug. 6, 1958, at site about 1 mi west on south shore of cove at same datum.

REMARKS.--Tsala Apopka Lake borders along the west bank of the Withlacoochee River and consists of many lakes and sloughs, some connected and some not.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation observed, 42.94 ft, Apr. 4,5, 1960; minimum observed, 32.30 ft, July 10, 1957.

EXTREMES FOR CURRENT YEAR.--Maximum elevation observed, 40.46 ft, Feb. 1; minimum observed, 39.02 ft, May 26.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
INSTANT VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	40.46	39.86	39.86	39.40	---	39.70	---	39.65
2	---	39.98	40.06	---	---	---	---	---	39.06	---	39.86	---
3	39.86	---	---	---	40.44	40.04	39.80	39.39	---	39.70	---	---
4	---	39.98	---	---	---	---	---	---	---	---	39.82	39.55
5	40.06	---	40.02	---	---	40.00	39.78	39.38	39.08	39.70	---	---
6	---	---	---	---	40.10	---	---	---	---	---	---	39.56
7	40.04	40.10	40.00	---	---	---	39,75	---	39.10	39.72	39.80	---
8	---	---	---	---	40.10	39.96	---	39.32	---	---	---	39.54
9	---	40.06	40.00	40.25	---	---	---	---	39.10	---	39.70	---
10	40.04	---	---	---	---	39.94	39.68	39.28	---	39.69	---	---
11	---	40.04	---	40.20	---	---	---	---	---	---	39.69	---
12	40.04	---	40.02	---	---	---	39.66	39.28	39.08	39.67	---	---
13	---	---	---	40.15	---	39.92	---	---	---	---	---	---
14	40.00	40.04	40.02	---	40.06	---	39.64	---	---	39.67	39.76	---
15	---	---	---	---	---	39.90	---	39.22	---	---	---	---
16	---	40.02	---	40.25	---	---	---	---	---	---	39.72	---
17	39.98	---	---	---	---	39.90	39.68	39.18	---	39.66	---	---
18	---	40.00	---	40.25	---	---	---	---	---	---	39.66	---
19	39.96	---	---	---	---	---	39.66	39.14	---	39.69	---	---
20	---	---	40.18	40.10	39.84	39.90	---	---	---	---	---	---
21	39.94	40.00	---	---	---	---	39.60	---	---	39.68	39.70	---
22	---	---	---	---	39.90	39.98	---	39.08	---	---	---	---
23	---	40.04	40.20	40.25	---	---	---	---	---	---	39.67	---
24	40.00	---	---	---	39.90	39.90	39.54	39.04	---	39.86	---	---
25	---	40.08	---	40.25	---	---	---	---	---	---	39.62	---
26	40.00	---	---	---	---	39.90	39.50	39.02	---	39.84	---	39.70
27	---	---	---	40.20	39.88	---	---	---	---	---	---	---
28	39.98	40.08	---	---	---	39.90	39.42	---	---	39.80	39.60	---
29	---	---	---	---	---	---	---	39.10	---	---	---	---
30	---	40.06	---	40.45	---	---	---	39.14	---	---	39.55	---
31	40.00	---	---	---	---	39.88	---	39.08	---	39.90	---	---

WITHLACOOCHEE RIVER BASIN

02312950 TSALA APOPKA LAKE AT HERNANDO, FL

LOCATION.--Lat 28°54'08", long 82°22'30", in SE¼ sec.23, T.18 S., R.19 E., Citrus County, Hydrologic Unit 03100208, on southwest shore of west bay near northwest end of lake, on public pier at Hernando.

SURFACE AREA.--About 19,000 acres (30 mi^2).

DRAINAGE AREA.--Indeterminate.

PERIOD OF RECORD.--April 1936 to April 1950 (monthly), incomplete; July 1957 to July 1958 (weekly), incomplete; August 1958 to current year (once-daily). Records prior to October 1960 are unpublished and available in files of the Orlando Subdistrict office.

GAGE.--Nonrecording gage. Datum of gage is National Geodetic Vertical Datum of 1929. Prior to July 19, 1957, at datum 36.60 ft higher and July 19, 1957, to Jan. 12, 1971, at three different sites in the immediate vicinity, at present datum.

REMARKS.--Tsala Apopka Lake borders along the west bank of the Withlacoochee River and consists of many lakes and sloughs, some connected and some not.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation observed, 41.74 ft, Apr. 6, 1960; minimum observed, 30.92 ft, July 19, 1957.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
INSTANT VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	38.60	38.36	38.50	38.38	38.56	38.48	38.34	37.84	37.46	38.26	38.46	38.38
2	38.58	38.36	38.48	38.38	38.56	38.66	38.32	37.94	37.44	38.42	38.46	38.38
3	38.56	38.34	38.46	38.38	38.54	38.84	38.30	37.90	37.40	38.48	38.48	38.44
4	38.64	38.40	38.46	38.38	38.52	38.70	38.28	37.88	37.38	38.36	38.46	38.48
5	38.62	38.38	38.44	38.36	38.52	38.66	38.28	37.86	37.36	38.26	38.44	38.48
6	38.60	38.38	38.42	38.38	38.50	38.62	38.26	37.84	37.36	38.24	38.42	38.46
7	38.58	38.38	38.40	38.40	38.50	38.62	38.24	37.82	37.44	38.28	38.40	38.44
8	38.54	38.36	38.40	38.42	38.48	38.60	38.20	37.78	37.50	38.26	38.38	38.42
9	38.52	38.36	38.40	38.46	38.48	38.58	38.18	37.74	37.50	38.24	38.36	38.40
10	38.50	38.34	38.38	38.46	38.46	38.58	38.18	37.72	37.46	38.22	38.38	38.40
11	38.50	38.32	38.40	38.48	38.44	38.58	38.18	37.80	37.44	38.20	38.38	38.38
12	38.48	38.30	38.44	38.50	38.44	38.56	38.20	37.78	37.42	38.18	38.36	38.36
13	38.48	38.30	38.46	38.52	38.42	38.54	38.18	37.76	37.44	38.18	38.38	38.34
14	38.48	38.30	38.46	38.54	38.40	38.54	38.16	37.74	37.40	38.16	38.38	38.32
15	38.50	38.28	38.46	38.54	38.38	38.54	38.12	37.72	37.38	38.14	38.38	38.30
16	38.50	38.28	38.44	38.52	38.38	38.52	38.14	37.70	37.38	38.12	38.36	38.28
17	38.52	38.26	38.44	38.50	38.38	38.54	38.14	37.68	37.68	38.10	38.34	38.28
18	38.52	38.26	38.42	38.48	38.40	38.54	38.14	37.66	37.68	38.14	38.30	38.28
19	38.52	38.24	38.40	38.48	38.38	38.52	38.12	37.64	37.66	38.14	38.30	38.28
20	38.54	38.22	38.40	38.46	38.38	38.50	38.08	37.60	37.70	38.16	38.32	38.26
21	38.52	38.20	38.40	38.50	38.38	38.48	38.08	37.58	37.80	38.14	38.30	38.24
22	38.50	38.20	38.40	38.56	38.60	38.46	38.08	37.56	37.90	38.36	38.30	38.22
23	38.52	38.44	38.38	38.60	38.58	38.44	38.06	37.54	38.00	38.36	38.28	38.38
24	38.54	38.46	38.38	38.60	38.56	38.48	38.02	37.52	38.06	38.36	38.26	38.40
25	38.54	38.46	38.38	38.60	38.54	38.46	37.98	37.50	38.20	38.36	38.24	38.46
26	38.48	38.50	38.38	38.60	38.52	38.46	37.96	37.48	38.18	38.34	38.22	38.44
27	38.46	38.52	38.38	38.60	38.50	38.44	37.94	37.44	38.18	38.34	38.38	38.44
28	38.40	38.54	38.38	38.60	38.50	38.42	37.92	37.42	38.16	38.32	38.36	38.46
29	38.40	38.52	38.38	38.60	---	38.40	37.90	37.48	38.14	38.28	38.34	38.44
30	38.38	38.50	38.38	38.58	---	38.38	37.88	37.48	38.22	38.30	38.32	38.42
31	38.36	---	38.38	38.56	---	38.36	---	37.46	---	38.46	38.28	---
MEAN	38.51	38.36	38.42	38.50	38.47	38.53	38.13	37.67	37.68	38.26	38.36	38.38
MAX	38.64	38.54	38.50	38.60	38.60	38.84	38.34	37.94	38.22	38.48	38.48	38.48
MIN	38.36	38.20	38.38	38.38	38.38	38.36	37.88	37.42	37.36	38.10	38.22	38.22

CAL YR 1988 MEAN 38.22 MAX 38.92 MIN 37.18
WTR YR 1989 MEAN 38.27 MAX 38.84 MIN 37.36

WITHLACOOCHEE RIVER BASIN

02313229 LAKE ROUSSEAU NEAR DUNNELLON, FL

LOCATION.--Lat 29°00'35", long 82°37'01", in SW¼ sec.8, T.17 S., R.17 E., Levy County, Hydrologic Unit 03100208, at west end of lake, at upstream side of control structure of Inglis Dam on Withlacoochee River, 9.8 mi west of Dunnellon.

SURFACE AREA.--4,163 acres (6.50 mi^2).

DRAINAGE AREA.--2,020 mi^2, approximately.

PERIOD OF RECORD.--June 1964 to current year. Records for Withlacoochee River at Inglis Dam, near Dunnellon (station 02313230).

REVISED RECORDS.--WDR FL-72-3: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929. Prior to July 20, 1971, at site in forebay of power house of the old Inglis Dam at same datum. July 20, 1971, to Aug. 23, 1972, at site in private boat basin on south shore of lake at same datum.

REMARKS.--Lake is formed by earthen dam and concrete control structure consisting of two spillway bays with vertical lift gates. Lake was created to produce electric power but is now used for recreation only. Since December 1969, outflow from lake through Inglis Dam (station 02313230), Cross-Florida Barge Canal (station 02313237), and Withlacoochee River Bypass Channel (station 02313250).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily elevation, 28.18 ft, June 19, 1982; minimum daily, 21.70 ft, Oct. 11, 1972.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26.00	27.50	27.44	27.42	27.68	27.77	27.19	27.41	27.57	27.63	27.66	27.47
2	25.95	27.47	27.43	27.40	27.65	27.82	27.17	27.40	27.45	27.58	27.66	27.56
3	25.95	27.45	27.40	27.36	27.50	27.40	27.17	27.34	27.39	27.54	27.59	27.62
4	25.97	27.42	27.43	27.41	27.41	27.24	27.22	27.30	27.38	27.51	27.55	27.65
5	25.96	27.42	27.55	27.44	27.39	27.20	27.28	27.23	27.41	27.49	27.47	27.63
6	25.92	27.41	27.64	27.43	27.44	27.19	27.31	27.16	27.52	27.48	27.38	27.60
7	25.88	27.43	27.62	27.41	27.49	27.19	27.29	27.18	27.69	27.47	27.37	27.55
8	25.95	27.42	27.60	27.41	27.53	27.18	27.33	27.20	27.76	27.43	27.43	27.48
9	26.13	27.43	27.57	27.45	27.54	27.16	27.30	27.18	27.48	27.45	27.53	27.45
10	26.22	27.50	27.59	27.49	27.46	27.29	27.26	27.19	27.25	27.48	27.63	27.45
11	26.26	27.55	27.61	27.50	27.40	27.41	27.26	27.28	27.19	27.48	27.59	27.49
12	26.26	27.59	27.50	27.48	27.44	27.47	27.28	27.30	27.29	27.47	27.60	27.52
13	26.30	27.58	27.43	27.45	27.46	27.51	27.29	27.36	27.40	27.46	27.62	27.55
14	26.50	27.51	27.52	27.44	27.48	27.51	27.30	27.45	27.48	27.47	27.60	27.56
15	26.77	27.45	27.58	27.40	27.50	27.51	27.35	27.51	27.59	27.45	27.54	27.59
16	26.92	27.37	27.55	27.46	27.49	27.50	27.40	27.60	27.65	27.44	27.48	27.62
17	27.00	27.31	27.47	27.52	27.43	27.51	27.39	27.66	27.67	27.46	27.41	27.71
18	27.04	27.28	27.43	27.55	27.36	27.48	27.35	27.65	27.64	27.47	27.36	27.68
19	27.04	27.30	27.42	27.57	27.39	27.46	27.31	27.50	27.59	27.55	27.43	27.64
20	27.09	27.29	27.47	27.57	27.48	27.41	27.27	27.39	27.59	27.58	27.53	27.58
21	27.28	27.37	27.50	27.63	27.53	27.36	27.25	27.36	27.55	27.57	27.59	27.50
22	27.39	27.55	27.55	27.54	27.67	27.33	27.20	27.39	27.57	27.64	27.64	27.46
23	27.43	27.63	27.56	27.36	27.48	27.27	27.15	27.46	27.73	27.71	27.68	27.58
24	27.44	27.49	27.55	27.35	27.36	27.22	27.18	27.52	27.67	27.73	27.64	27.63
25	27.46	27.43	27.49	27.34	27.31	27.19	27.25	27.55	27.47	27.67	27.59	27.67
26	27.44	27.47	27.46	27.34	27.38	27.17	27.31	27.51	27.30	27.58	27.58	27.64
27	27.40	27.47	27.43	27.42	27.48	27.17	27.36	27.51	27.27	27.47	27.59	27.62
28	27.38	27.49	27.42	27.58	27.58	27.20	27.41	27.53	27.35	27.35	27.57	27.55
29	27.45	27.45	27.45	27.65	---	27.20	27.43	27.60	27.44	27.37	27.56	27.46
30	27.49	27.43	27.45	27.64	---	27.18	27.42	27.64	27.62	27.49	27.52	27.44
31	27.50	---	27.44	27.67	---	27.16	---	27.64	---	27.60	27.48	---
MEAN	26.73	27.45	27.50	27.47	27.48	27.34	27.29	27.42	27.50	27.52	27.54	27.56
MAX	27.50	27.63	27.64	27.67	27.68	27.82	27.43	27.66	27.76	27.73	27.68	27.71
MIN	25.88	27.28	27.40	27.34	27.31	27.16	27.15	27.16	27.19	27.35	27.36	27.44

CAL YR 1988 MEAN 27.27 MAX 27.84 MIN 25.84
WTR YR 1989 MEAN 27.40 MAX 27.82 MIN 25.88

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October 1, 1978

FACTORS FOR CONVERTING INCH-POUND UNITS TO INTERNATIONAL SYSTEM UNITS (SI)

The following factors may be used to convert the inch-pound units published herein to the International System of Units (SI).

Multiply inch-pound units	By	To obtain SI units
	Length	
inches (in)	$2.54x10^{1}$	millimeters (mm)
	$2.54x10^{-2}$	meters (m)
feet (ft)	$3.048x10^{-1}$	meters (m)
miles (mi)	$1.609x10^{0}$	kilometers (km)
	Area	
acres	$4.047x10^{3}$	square meters (m^2)
	$4.047x10^{-1}$	square hectometers (hm^2)
	$4.047x10^{-3}$	square kilometers (km^2)
square miles (mi^2)	$2.590x10^{0}$	square kilometers (km^2)
	Volume	
gallons (gal)	$3.785x10^{0}$	liters (L)
	$3.785x10^{0}$	cubic decimeters (dm^3)
	$3.785x10^{-3}$	cubic meters (m^3)
million gallons	$3.785x10^{3}$	cubic meters (m^3)
	$3.785x10^{-3}$	cubic hectometers (hm^3)
cubic feet (ft^3)	$2.832x10^{1}$	cubic decimeters (dm^3)
	$2.832x10^{-2}$	cubic meters (m^3)
cfs-days	$2.447x10^{3}$	cubic meters (m^3)
	$2.447x10^{-3}$	cubic hectometers (hm^3)
acre-feet (acre-ft)	$1.233x10^{3}$	cubic meters (m^3)
	$1.233x10^{-3}$	cubic hectometers (hm^3)
	$1.233x10^{-6}$	cubic kilometers (km^3)
	Flow	
cubic feet per second (ft^3/s)	$2.832x10^{1}$	liters per second (L/s)
	$2.832x10^{1}$	cubic decimeters per second (dm^3/s)
	$2.832x10^{-2}$	cubic meters per second (m^3/s)
gallons per minute (gal/min)	$6.309x10^{-2}$	liters per second (L/s)
	$6.309x10^{-2}$	cubic decimeters per second (dm^3/s)
	$6.309x10^{-5}$	cubic meters per second (m^3/s)
million gallons per day	$4.381x10^{1}$	cubic decimeters per second (dm^3/s)
	$4.381x10^{-2}$	cubic meters per second (m^3/s)
	Mass	
tons (short)	$9.072x10^{-1}$	megagrams (Mg) or metric tons

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